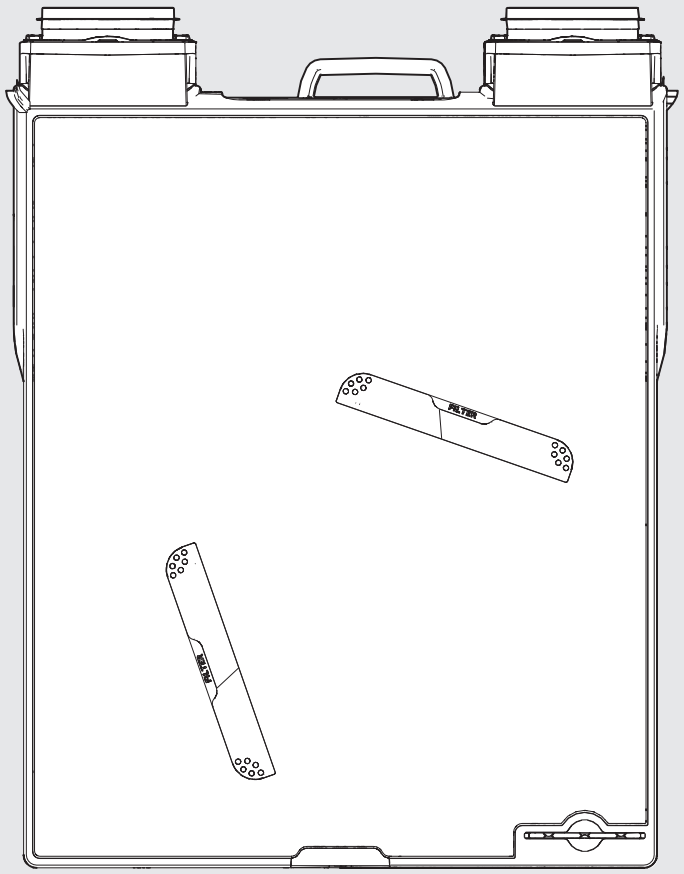
HEATRAE SADIA

SMARTER | CLEANER | WARMER

# Advance / Advance Plus

## Installer manual



# Introduction

This manual is intended for use by the installer of the ventilation system. It contains important information concerning installation, use, maintenance and troubleshooting for the ventilation system.

The installer is responsible for installing and commissioning the ventilation unit.

The following definitions are used in this manual to draw attention to hazards, instructions or indications related to people, products, installations and/or the surroundings.

**Warning!**

Indicates a hazard that can cause injury and/or severe damage to the product, system or surrounding area.

**Caution!**

Instructions important for the installation, functioning, operation or maintenance of the product. Failure to observe these instructions can result in minor injury and/or severe damage to the product, system or surrounding area.

**Note**

Instructions important for the installation, functioning, operation or maintenance of the product. Failure to observe these instructions can result in minor damage to the product, system or surrounding area.

**Tip**

Instructions that may be important for the installation, functioning, operation or maintenance of the product, but are not related to injury or material damage.

**Tip**

Do not forget to register the product via the Heatrae Sadia website. (www.heatraesadia.com/warranty_registration)

Although this manual has been drawn up with the utmost care, no rights may be derived from this document.

Heatrae Sadia reserves the right to modify products and manuals without prior notice.

Due to our continuous product improvement process, the illustrations in this document may not match the delivered product. The latest version (if available) can be downloaded from our website via www.heatraesadia.com.

# Contents


1. Safety and other regulations 5

2. Product information 7
   - 2.1. Models 7
   - 2.2. Accessories 7
   - 2.3. Technical specifications 8
   - 2.4. Capacity 8
   - 2.5. Technical drawings 9
   - 2.6. Parts 10
   - 2.7. Controls 11

3. Installation 13
   - 3.1. Installation requirements 13
   - 3.2. Installing the ventilation unit 13
   - 3.3. Connecting the condensate drain 21
   - 3.4. Connecting the ducts 22
   - 3.5. Electrical connection 23

4. Operation 24
   - 4.1. Control options 24
   - 4.2. RF-VI wireless remote control 24
   - 4.3. Wireless control switch with timer 25
   - 4.4. Wireless control switch with automatic control/ timer 26
   - 4.5. Wired three-position switch 26
   - 4.6. Pairing and unpairing RF remote controls 27
   - 4.7. Pairing and unpairing RF sensors 27

5. Commissioning 28
   - 5.1. Preparation 28
   - 5.2. Putting into service 28
   - 5.3. Adjusting the capacity 29

6. Inspection and maintenance 30
   - 6.1. Inspection and maintenance schedule 30
   - 6.2. Check for unusual noises 31
   - 6.3. Inspecting and cleaning the fan 31
   - 6.4. Inspecting and cleaning the bypass valve 32
   - 6.5. Inspecting, cleaning and replacing filters 34
   - 6.6. Maintenance 35
   - 6.7. RF remote control maintenance 35
   - 6.8. Inspection of additional RF sensors 35
   - 6.9. Inspecting and cleaning air valves 35
   - 6.10. Inspecting/cleaning ducts 35

7. Faults 36

8. Service parts 40

9. Warranty 42

10. Declarations 43

# 1. Safety and other regulations

Warning!

- The specifications and settings of the ventilation system comply exclusively with the standards and statutes of the country in which the ventilation system is sold. Applications outside this country can lead to very dangerous situations.
- The entire system must comply with the current regulations as referred to in this document and other applicable documents provided by the manufacturer.
- All supplements, amendments and regulations effective at the time of installation are applicable for all regulations.
- After installation, no health, safety or environmental risks may be present in accordance with the applicable CE standards. This also applies to other products included in the system.
- Do not use the product for purposes other than those for which it is intended, as described in this manual.
- Be careful when using electrical appliances:
  - Never touch the appliance with wet hands.
  - Never touch the appliance when barefoot.
- This product and/or system may be operated safely by children aged 12 years and older and by people with physical, sensory or mental disabilities or a lack of experience/knowledge if under supervision or after having received instructions regarding safe use, and if they are aware of the product and/or system hazards.
- Cleaning and maintenance by the user may not be done by children or people with physical, sensory or mental disabilities or a lack of experience/knowledge without supervision.
- Do not allow children to play with the product and/or system.
- Do not use the product in the vicinity of flammable or volatile substances such as alcohol, insecticides, petrol etc.
- Work may solely be performed on the system by Heatrae Sadia or recognised installers in accordance with the provisions laid down in this manual. Only original accessories and parts produced by the manufacturer may be used for these purposes.
- The system includes parts which may be live. The installer should take the following steps before carrying out work on an open system:
  - Disconnect power to the appliance or system by unplugging the power cord at the wall socket.

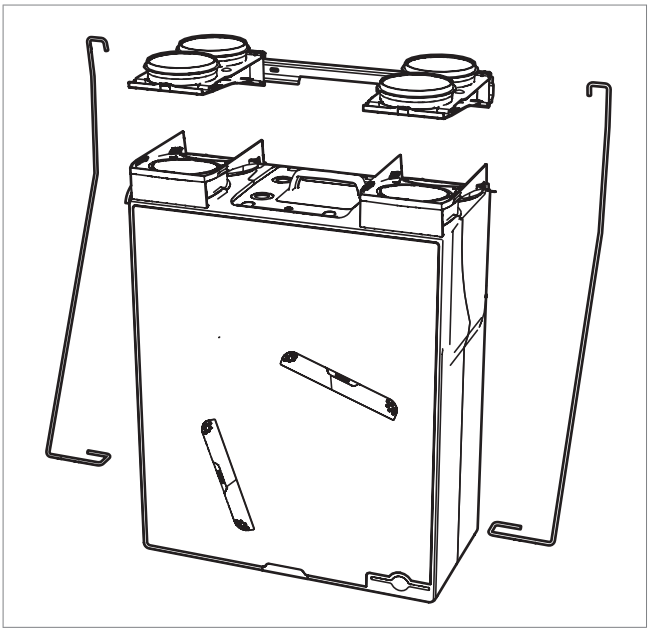
- Secure the appliance or system against being switched on accidentally.
- The appliance includes moving parts. When the plug is removed from the wall socket, these parts will continue moving for a few seconds. Therefore, you should wait a minimum of 10 seconds before opening the appliance after removing the plug.

Important!

- The safety instructions must be followed in order to prevent physical injury and/or damage to the product.
- Maintenance instructions must be followed to prevent damage and excessive wear and tear.
- The product may not be modified.
- The product is only suitable for use with a 230 V, 50 Hz AC power supply system.
- Ensure that the electrical system to which the product is connected meets the necessary conditions.
- Do not expose the product to the elements.
- Do not place any objects on top of the device.
- Inspect the product regularly for faults. In the event of faults, immediately contact your installer or Heatrae Sadia.
- Switch the product off if:
  - The product is not working properly.
  - You want to clean the outside of the product.
- Ensure that the electrical circuit does not become damaged.
- Do not use the device to extract air from boilers, heating systems etc.
- Ensure that the device drains into a sewer system which leads outside, and is suitable and installed for this purpose.
- Ensure that air valves and grilles are not obstructed, and that they are clean.
- Watch out for sharp and protruding duct sections during periodic cleaning of air valves and grilles.

# 2. Product information

The Advance and Advance Plus consist of a central balanced ventilation unit with a heat recovery system and a duct connection set. The Advance Plus is also equipped with an automatic bypass valve. The operation of the bypass valve is described under Bypass control on page 12.



## 2.1. Models

| Models | | |
|---|---|---|
| Item | Type | Description |
| 95060001 | Advance | Balanced ventilation unit with heat recovery |
| 95060007 | Advance Plus | Balanced ventilation unit with heat recovery and bypass valve |

## 2.2. Accessories

| Accessories | | |
|---|---|---|
| Item no. | Type | Description |
| 95970200 | RF-VI TRANSMITTER | Wireless RF-VI remote with LED signals, three modes and timer function |
| 95970003 | RFT-TRANSMITTER W | Wireless RF control switch with three settings and a timer function (White) |
| 95970204 | RFT-AUTO CO2 | RF control switch with two positions, automatic and timer functions |
| 95970002 | HRS-3I C | Conventional wired switch with three settings |
| 95970201 | RF-CO2 | 230 V RF $CO_2$-sensor |
| 95970203 | RF-RH [BAT] | RF-RH battery-powered sensor |
| 95970202 | RF-PIR | RF-PIR battery-powered presence sensor |

## 2.3. Technical specifications

| Advance/Advance Plus | |
|---|---|
| **Dimensions (H x W x D)** | 760 x 597 x 290 mm |
| **Weight** | 12 kg (including duct connection set) |
| **Installation** | 2x 6 mm screws (not provided); on wall/ceiling/floor with min. load-bearing capacity 200 kg/m$^2$ |
| **Housing** | IP 30, double-insulated |
| **Housing and insulation** | EPP housing (grey), PP hollow-core panel (internal), foamed PVC faceplates (white) |
| **Duct connection parts / condensate drain** | PP (black) |
| **Motor module** | HIPS (black) |
| **Filter caps** | TPE (RAL 7040) |
| **Mounting brackets** | Galvanised steel |
| **Filter class** | Standard G3 (dust filter for the first three months), then replace with G4 or F7 |
| **Duct nozzles (4x)** | Ø 125 mm, top side, with leak-safe seals |
| **Heat exchanger** | Plastic counterflow exchanger (PS), not removable |
| **Thermal efficiency** | Up to 91% |
| **Condensate drain (2x)** | Ø 14 mm OD, PVC condensate hose (1 m), included |
| **Temperature sensors** | 1x outside air temperature sensor; 1x exhaust air temperature sensor |
| **Bypass control*** | Automatic control with built-in bypass valve on extraction side, 100% |
| **Frost control** | Automatic frost protection (reduce fan speed at temperatures below -1°C) |
| **Motor (1x)** | DC (CE) 120 W |
| **Impellers (2x)** | PA plastic (backward curved) |
| **Maximum power consumption** | 90 W |
| **Power supply** | 230 V, 50 Hz, 4-wire power cable |
| **Cable length** | 1.5 m (RAL 7001) |
| **RF (built in)** | 100 m in free space, 868 MHz |
| **Manual** | The user manual can also be placed in the bottom corner of the unit |

* Applies exclusively to Advance Plus

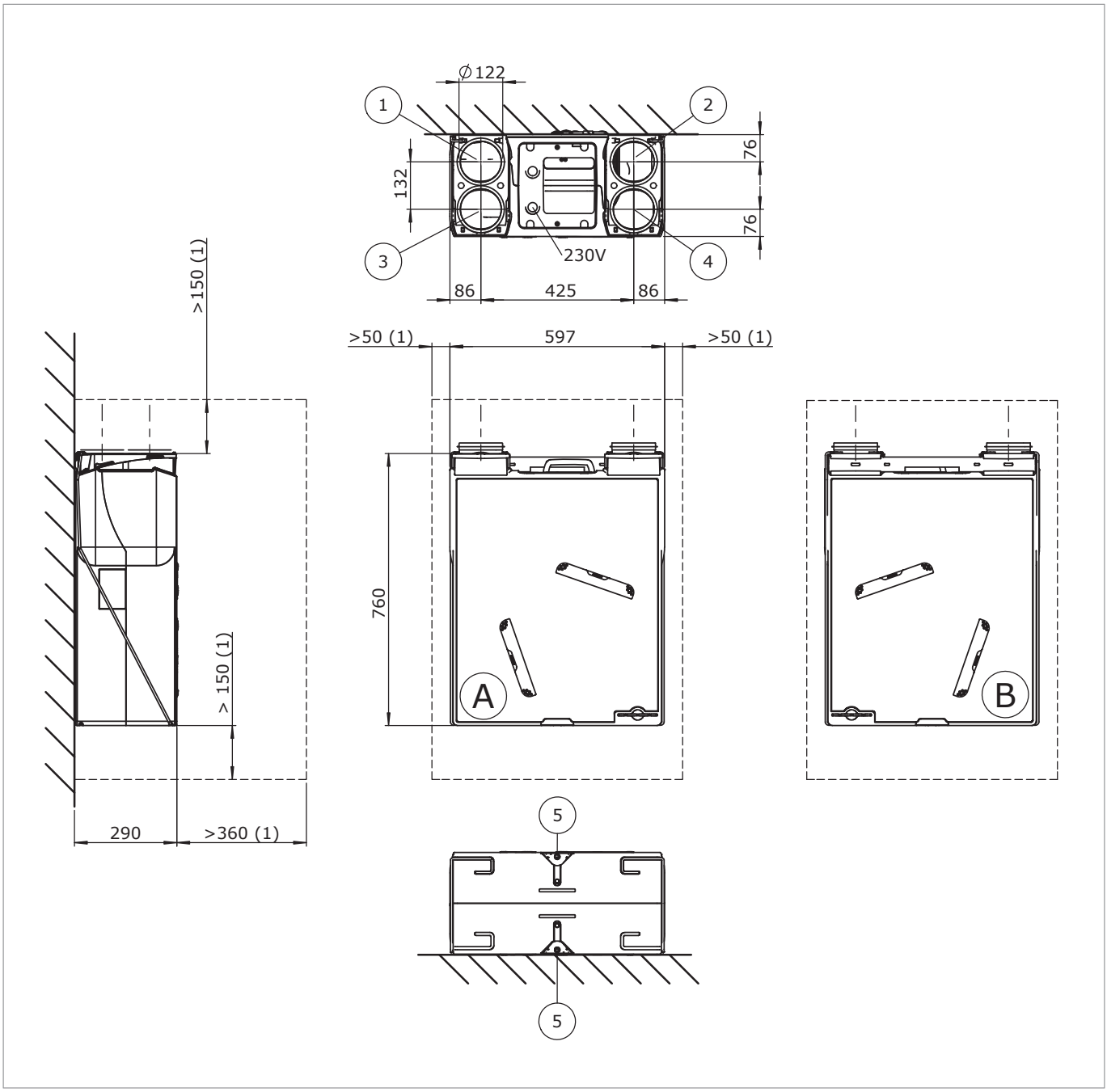
## 2.4. Capacity

| | Capacity [m$^3$/h] | Pressure [Pa] | Power [W] |
|---|---|---|---|
| **Mode 1 minimum** | 25 | 12 | 4 |
| **Mode 1 standard** | 50 | 17 | 6 |
| **Mode 1 maximum** | 75 | 38 | 13 |
| **Mode 2** * | 100 | 70 | 26.5 |
| **Mode 3 minimum** | 75 | 38 | 13 |
| **Mode 3 standard** | 125 | 104 | 44 |
| **Mode 3 maximum** | 150 | 150 | 72 |
| **Mode 3 maximum** | 175 | 100 | 78 |

* *Mode 2 is a calculated value, depending on the set minimum and maximum capacity.*

Mode 1 and 3 can be adjusted using the potentiometers on the motor module.
(see Adjusting the capacity on page 29).

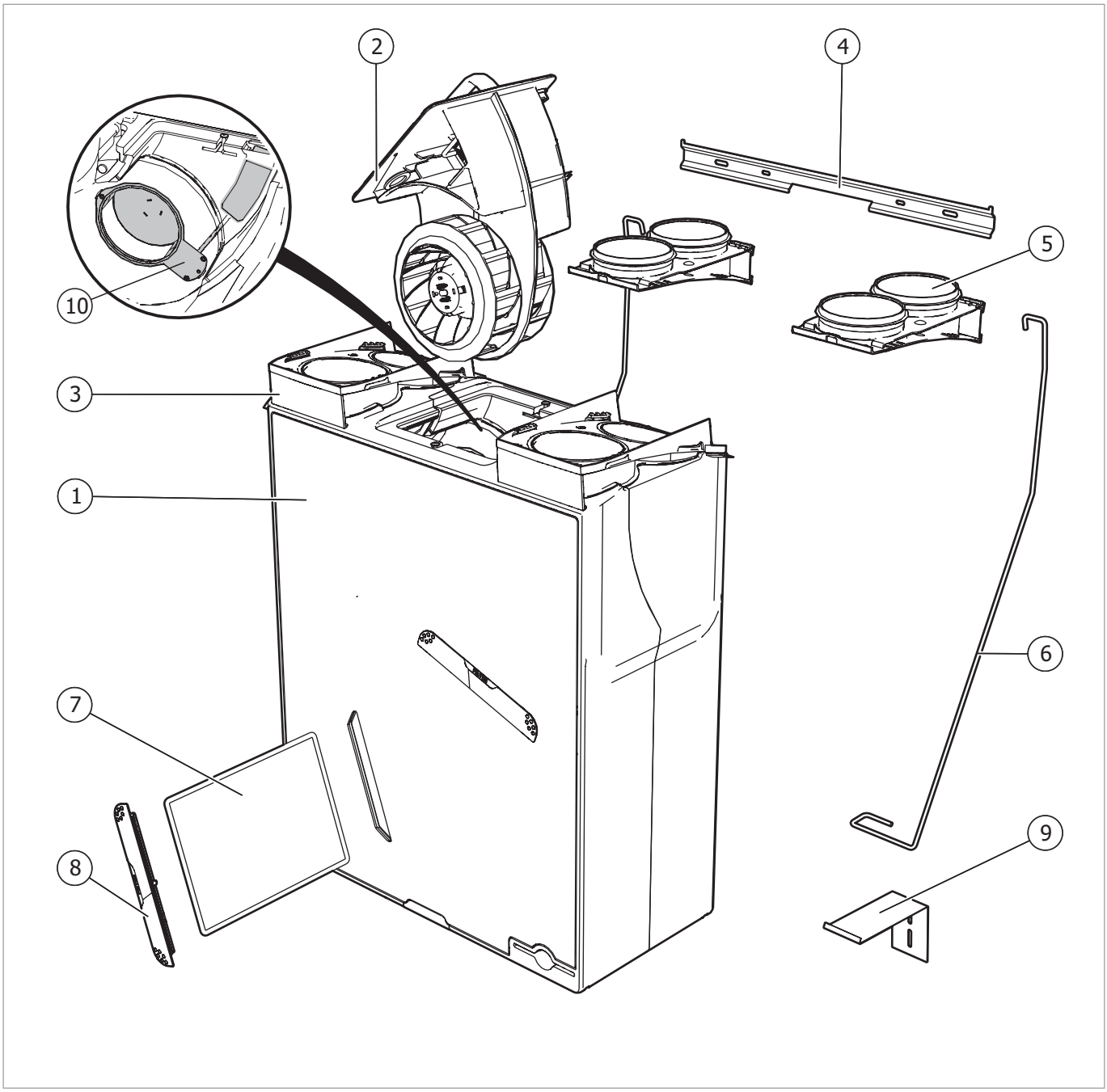
## 2.5. Technical drawings




*(1) Minimum clearance around the ventilation unit*

| Number | Description |
|---|---|
| 1 | Exhaust air to outside |
| 2 | Exhaust air from dwelling |
| 3 | Supply air from outside |
| 4 | Supply air to dwelling |
| 5 | Condensate drain (2x) |

## 2.6. Parts




| Main components of Advance and Advance Plus | |
|---|---|
| Number | Description |
| 1 | Ventilation unit |
| 2 | Motor module |
| 3 | Duct adapter EPP side |
| 4 | Mounting bracket |
| 5 | Duct adapter duct side |
| 6 | Wire bracket |
| 7 | Filter |
| 8 | Filter cap |
| 9 | Ceiling mounting bracket |
| 10 | Bypass valve * |

* *Applies exclusively to Advance Plus*

## 2.7. Controls

The Advance and Advance Plus come as standard with three-position control which allows the flow rates at low and high speed to be adjusted as desired with the potentiometers on the unit. It is also possible to pair RF sensors with the ventilation unit for automatic ventilation control. In addition, the ventilation units have some controls that operate continuously in the background.

The Advance Plus also has a bypass control which controls the bypass valve (see Bypass control on page 12).

### 2.7.1. Optional sensors

A number of optional RF sensors are available for the Advance and Advance Plus. When the ventilation unit is in Auto mode, the capacity is adjusted continuously and automatically.

### RF $CO_2$ sensor

To ensure a healthy indoor climate and to prevent the air in the dwelling from becoming stale, it is important that the $CO_2$ (carbon dioxide) concentration does not become too high.

The sensor can be placed in any room (except the bathroom), but should preferably be placed in the living room or bedroom.

The sensor measures the $CO_2$ concentration in the room. It translates this $CO_2$ concentration into a ventilation demand and communicates this wirelessly to the ventilation unit paired with the sensor. This allows ventilation to be continuously and automatically adjusted, and it ensures that a good indoor climate is achieved in the most effective and energy efficient manner.

This sensor can be used for "living area control", which causes the ventilation capacity to be increased gradually in response to a rising $CO_2$ concentration. A "sleeping area control" is also available. In this mode the ventilation capacity is increased more quickly in the event of rising $CO_2$ concentration because the extraction points are generally further away from the sleeping area.

In addition, the user can choose between ECO or COMFORT mode on the sensor. In COMFORT mode the system starts increasing the capacity at relatively low $CO_2$ concentration, resulting in more ventilation.

Once the $CO_2$ concentration has fallen sufficiently, the capacity is automatically decreased.

### RF-RH sensor

To ensure a healthy indoor climate and to prevent patches of damp and mould in the dwelling, it is important that the relative humidity does not stay high for too long.

The RF-RH sensor can be placed in any room, but preferably in the bathroom and/or washroom.

This sensor measures the relative humidity in the room. The sensor translates this relative humidity value into a ventilation demand and communicates this wirelessly to the ventilation unit with which the sensor is paired, or to a DF/QF controller with the room where it is registered. This allows ventilation to be continuously and automatically adjusted, and it ensures that a good indoor climate is achieved in the most effective and energy efficient manner.

This sensor can be used for "bathroom control", which causes the ventilation capacity to be increased quickly when there is a sudden rise in relative humidity (for example during showering). Another option is "washroom control", which causes the ventilation capacity to increase gradually in response to rising relative humidity.

As soon as the relative humidity has fallen sufficiently, the capacity is automatically decreased.

### RF-PIR sensor

To ensure a healthy indoor climate and to prevent unpleasant odours in the dwelling, it is important that there is enough ventilation when people are present.

The RF-PIR sensor can be placed in any room, for example in the toilet or in a bathroom with a toilet.

The sensor detects the presence (or absence) of people in the room and communicates this wirelessly to the ventilation unit with which it is paired. If the ventilation unit is in Auto mode, the capacity is continuously and automatically adjusted.

If the sensor detects movement, the ventilation system runs at increased capacity for a defined period. If the sensor detects continuous occupancy of the room, the capacity will be increased even more. If the motion sensor does not detect any movement within a set period, the capacity will automatically be decreased again.

This allows ventilation to be continuously and automatically adjusted, and it ensures that a good indoor climate is achieved in the most effective and energy efficient manner.

## 2.7.2. Bypass control

Solely the Advance Plus is equipped with a bypass valve in the exhaust air line. This makes it possible to control what happens to the (warm) exhaust air from the dwelling.

When the valve is in the normal position (closed), the exhaust air from the dwelling passes through the heat exchanger and exchanges heat with the cold supply air from outside.

If the valve is opened, the exhaust air no longer passes through the heat exchanger, so there is no heat exchange. Although the outside air still passes through the exchanger, the supplied outside air is not warmed. This is desirable when it is warmer inside than outside in the summer.

If in the summer it is cooler inside than outside, it is desirable to cool the incoming air ("cold recovery"). In this case, the valve is closed so that the relatively cool indoor air again passes through the exchanger.

The position of the bypass valve is automatically determined using the measured outdoor temperature and the measured exhaust air temperature.

## 2.7.3. Frost control

The Advance and Advance Plus have an automatic control which protects the heat exchanger against freezing. If the measured outside air temperature is lower than -1°C, the fan is gradually slowed down and eventually brought to a standstill. In this case, the unit will still respond to the timer (see "Operation"). The ventilation unit also checks whether the temperature has risen sufficiently for the fan to be switched back on.

**Note**

If the ventilation unit must continue running when the outside temperature is lower than -1°C in order to ensure sufficient ventilation, Heatrae Sadia advises using an external heater in the supply duct for outside air. The temperature setpoint for this must be -1°C.

## 2.7.4. Dirty filter control

The control of the Advance and Advance Plus uses a smart counter to keep track of when the filters need to be cleaned or replaced. This counter takes into account air quality, the service life of the filter and the fan speed. If the system detects that a filter is dirty, the ventilation unit sends a wireless message to this effect. This message can be displayed on specific paired devices, such as the RFT-L or the RF-VI (ventilation interface).

# 3. Installation

## 3.1. Installation requirements

**Caution!**

In order to prevent condensation, the duct from outside and the duct leading outside must be thermally insulated and vapour-tight right up to the ventilation unit.

Take the following into account when positioning the system:

- Install the ventilation unit:
  - in a closed area (where the system can cause as little noise disturbance as possible);
  - in a frost-free area;
  - in the vicinity of a 230 V AC 50 Hz power point; the length of the power cable is 1.5 m;
  - in the vicinity of a trap with a sewer connection (for connecting the condensate drain);
  - by mounting it on a wall/ceiling/floor with sufficient load-bearing capacity (min. 200 kg/m$^2$).
- When positioning the ventilation unit, ensure that you also leave enough space for servicing the system.

  *For this purpose, a minimum of 150 mm clearance should be left at the top and bottom of the unit, and 350 mm at the front (see Technical drawings on page 9).*

- The duct system and the outlet and inlet points must be correctly dimensioned.
- The correct fixing materials must be available.

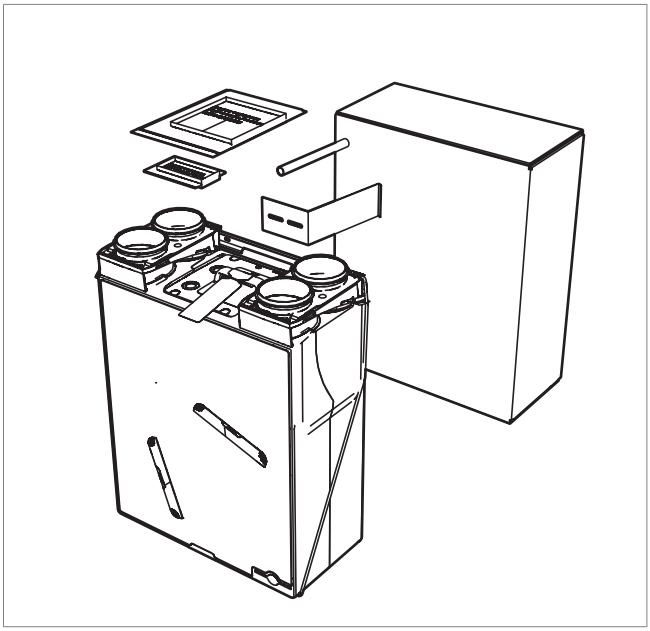
**Tip**

In order to avoid noise complaints, Heatrae Sadia advises fitting silencers on the ducts from and to the dwelling rooms.

## 3.2. Installing the ventilation unit

### 3.2.1. Unpacking and checking

a) Carefully remove the appliance from the box. If necessary, use the handle on top of the motor module to remove the ventilation unit from the box in an upright position.

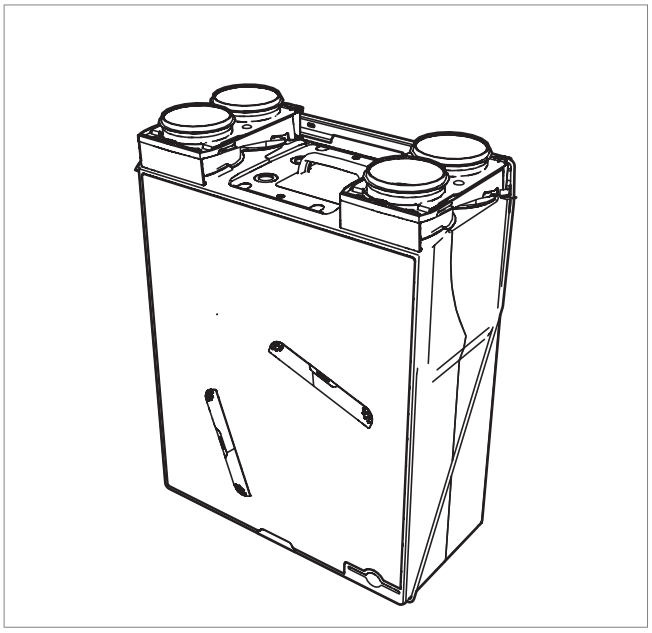


b) Check that the nameplate information and the type correspond to the sticker on the outside of the box.

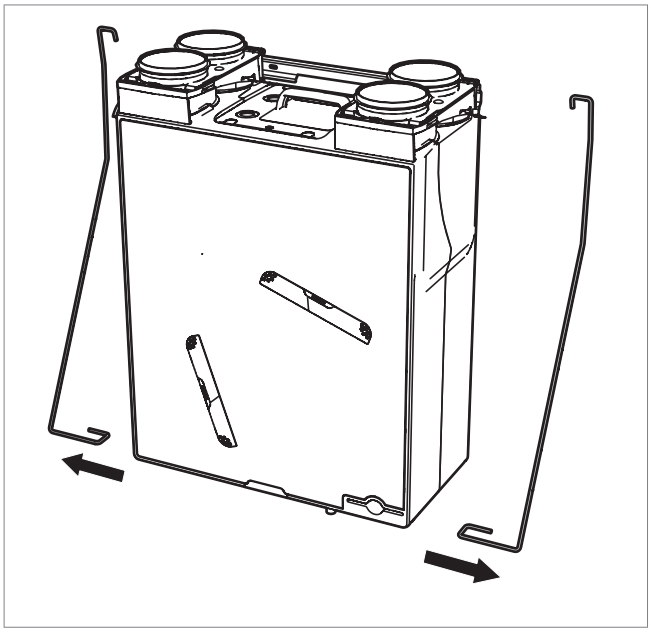
c) Check the appliance for damage and completeness.

d) Check that user and installer manuals, a ceiling mounting bracket and a condensate hose are included with the ventilation unit.

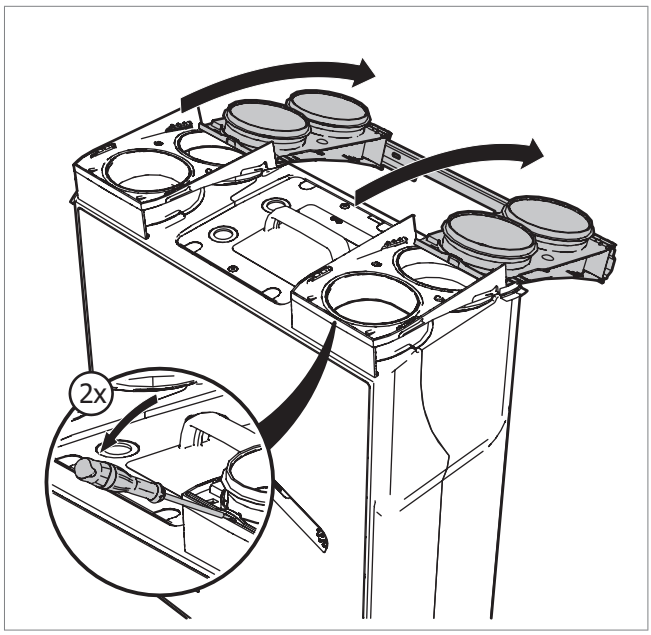
e) Place the ventilation unit upright on the floor, with the duct adapters at the top.



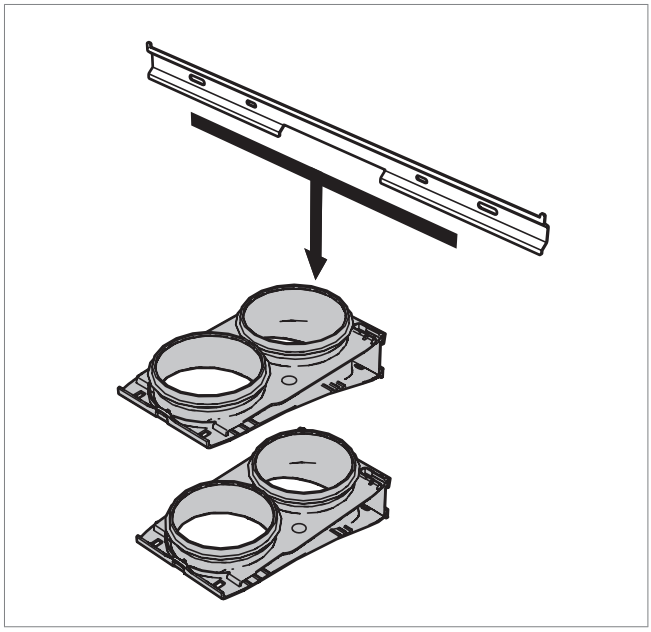
f) Remove the two wire brackets from the unit and set them aside.



g) Unlock both duct adapters on the front of the unit using a flat-head screwdriver. Then remove both adapters, which are connected together by the mounting bracket, from the unit simultaneously.




h) Then remove both duct adapters from the mounting bracket and put everything to one side.



## 3.2.2. Mounting positions

**Caution!**

Mount the ventilation unit on a concrete surface, not on a wooden or plaster surface or a surface with insufficient load-bearing capacity (<200 kg/m$^2$), since that may lead to excessive noise.

**Caution!**

Always ensure that the ventilation unit is installed with the ducts connected to the correct air inlets and outlets.

**Caution!**

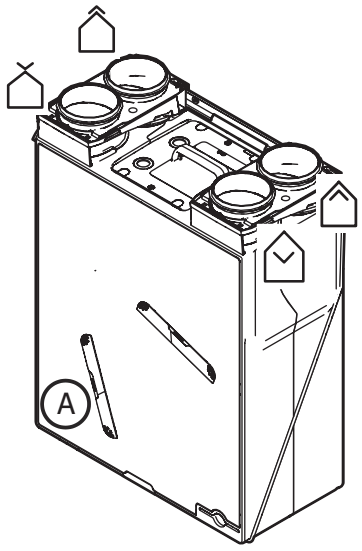
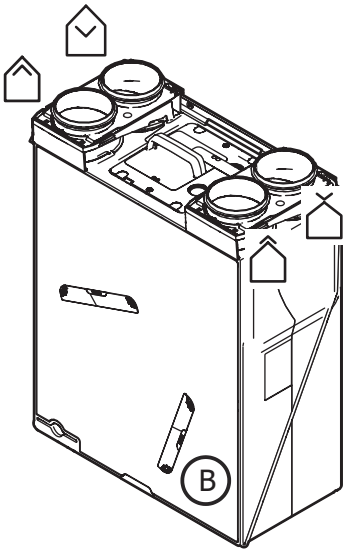
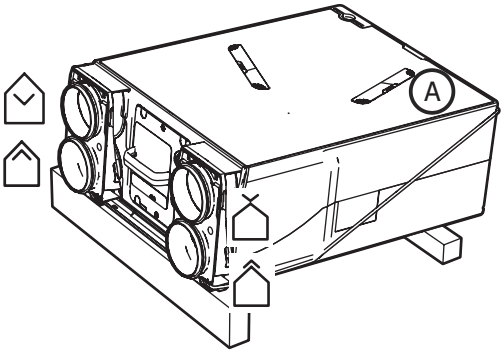
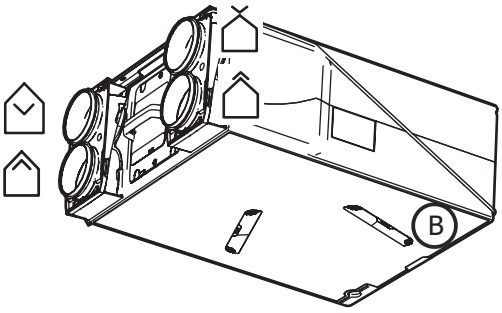
If the ventilation unit is mounted "inversely", the duct adapters must be swapped.

The ventilation unit can be mounted on the wall, floor or ceiling.

Depending on the configuration of the ducts, the ventilation unit can be wall mounted with the standard duct adapter arrangement (as delivered) or the inverse arrangement (see Converting before mounting).

The standard arrangement is always used for floor mounting, and the inverse arrangement must always be used with ceiling mounting. This is due to condensation water path in the heat exchanger.

The symbols on the ventilation unit indicate which ducts should be connected to which openings.

| Mounting positions | |
|---|---|
| Wall mounting, standard | Wall mounting, inverse [1] |
|  |  |
| Floor mounting, standard | Ceiling mounting, inverse [1] |
|  |  |

[1] *See Converting before mounting on page 17.*

Exhaust air to outside

Exhaust air from dwelling

Supply air from outside

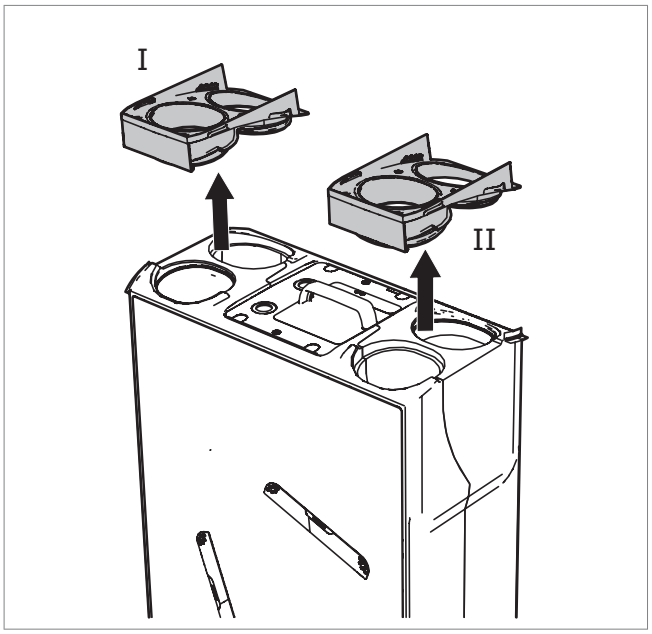
Supply air to dwelling

## 3.2.3. Converting before mounting

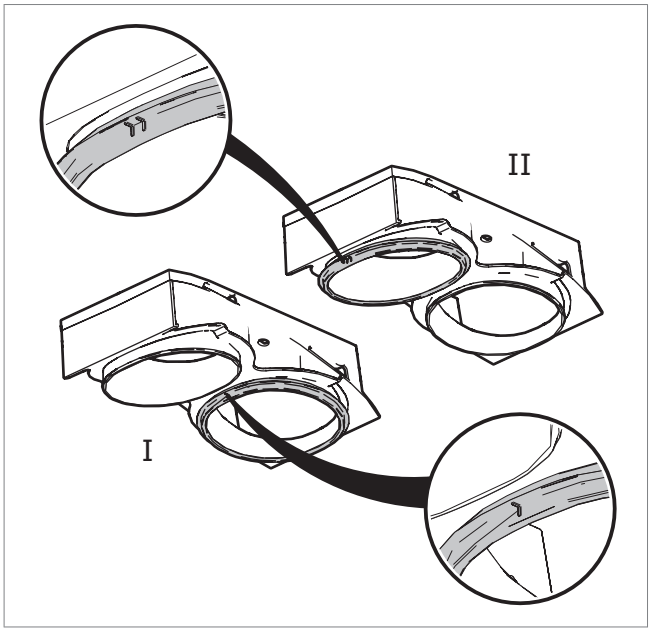
The Advance and Advance Plus are delivered as standard with the air inlet ducts on the wall side (mounting bracket side). This is the correct position for wall and floor mounting.

For ceiling mounting, or if this is more convenient with wall mounting, the ventilation unit can easily be inverted. If this is not necessary, the following section can be ignored.

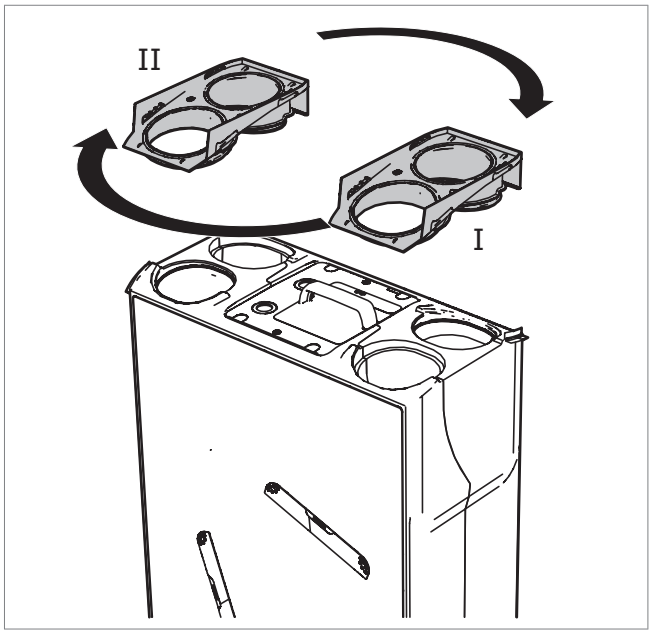
a) Pull both ventilation unit adapters out of the EPP housing.



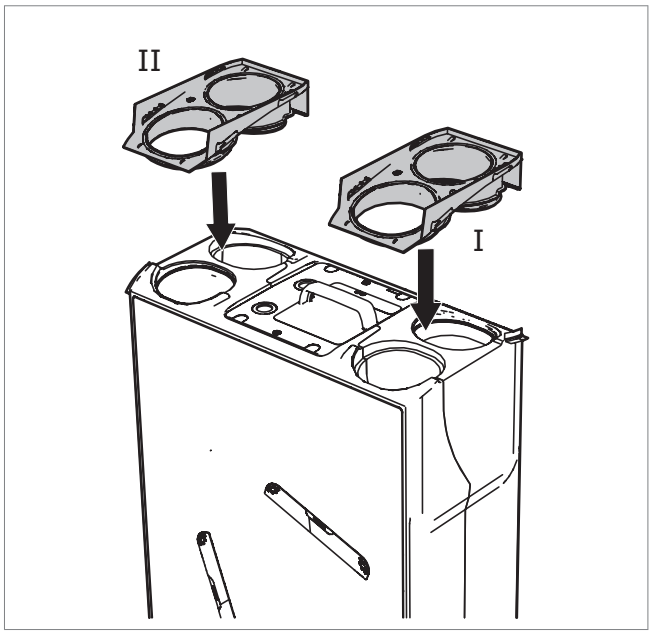

b) There is a blue seal ring on the underside of each adapter. Check whether these rings are fitted correctly to the adapters.




c) Rotate both ventilation unit adapters by 180°.



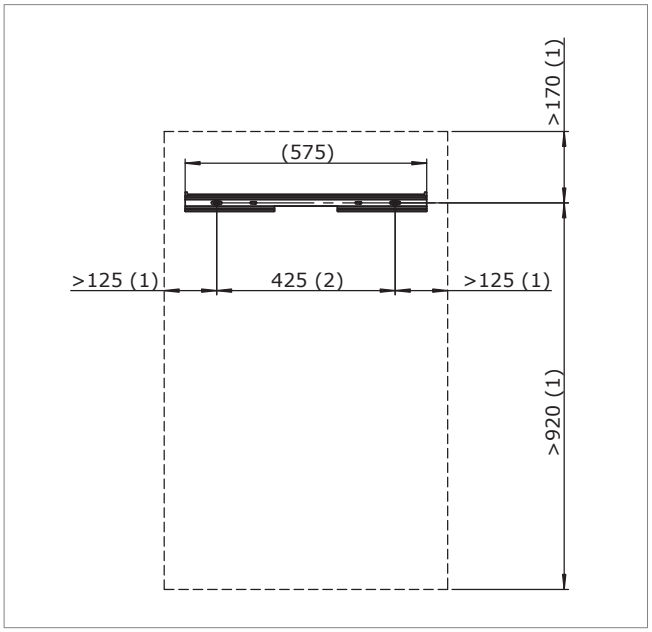

d) Press the ventilation unit adapter that was on the left side into the right side of the EPP housing, and press the ventilation unit adapter that was on the right side into the left side of the EPP housing (thereby switching the adapter positions).




The ventilation unit is now "inverted" and ready to be mounted.

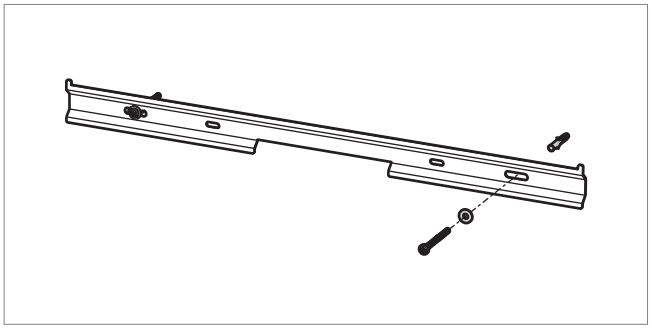
## 3.2.4. Wall mounting

a) Attach the mounting bracket to the wall using anchor plugs and 6 mm screws (not provided).




*(1) Minimum clearance around the ventilation unit*

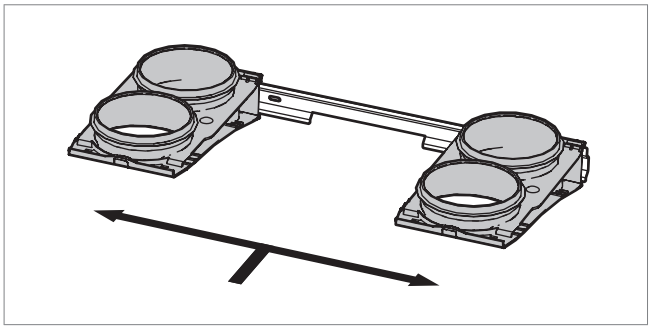
*(2) Distance between hole centres*



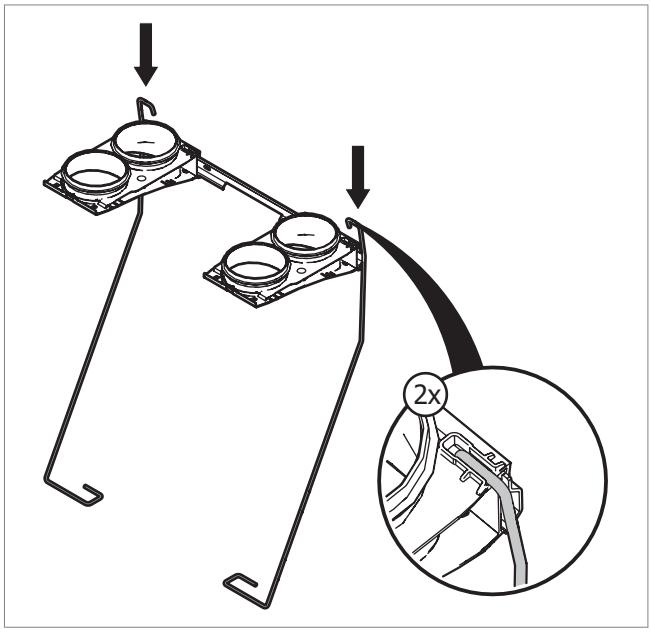
**Caution!**

Ensure that the mounting bracket is mounted horizontally and level for proper condensate drainage.

b) Slip the duct adapters back over the mounting bracket and push the two adapters to the left and to the right as far as they will go.



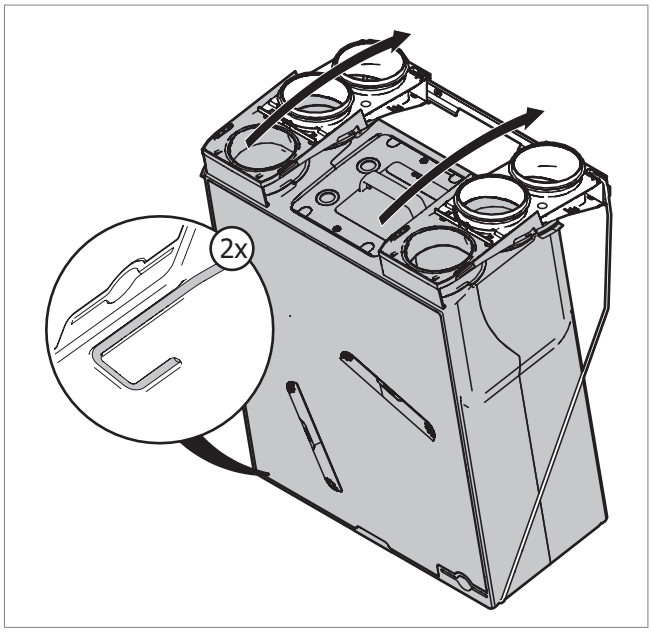
c) Hook the two wire brackets onto the outside of the duct adapters using the holes intended for this purpose.




**Caution!**

There is only one way to insert the ventilation unit adapters into the duct adapters.

d) Place the ventilation unit in the wire brackets, tilted forward slightly. There are recesses on the underside of the EPP housing into which the wire brackets fit exactly. When the adapters have been fully inserted into one another, you will hear a distinct click. This means the unit is firmly attached.

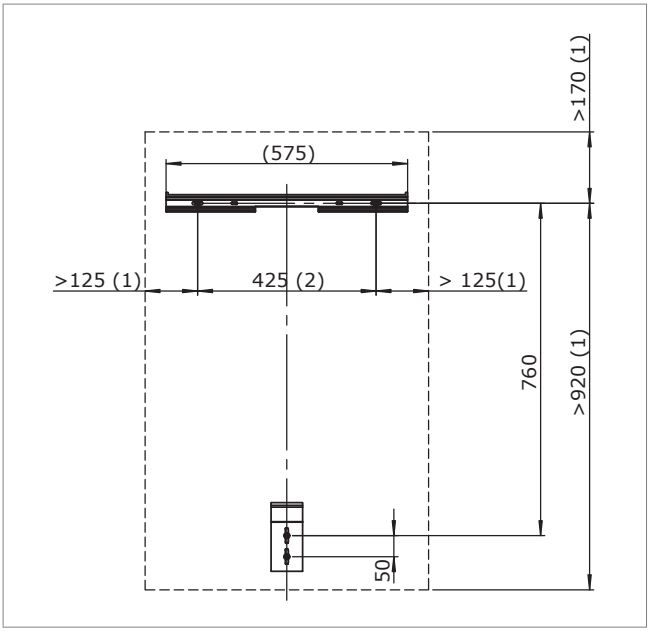


## 3.2.5. Ceiling mounting

**Caution!**

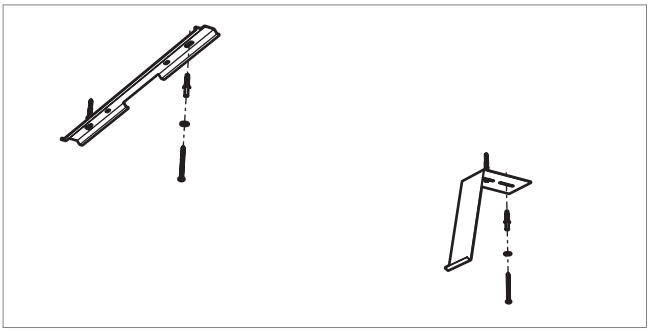
With this mounting option, the ventilation unit needs to be mounted with enough tilt to ensure correct condensate drainage. It is also important to ensure that the condensate hose can be mounted with a slope from the ventilation unit to the condensate drain.

a) Attach the mounting bracket and the ceiling bracket to the ceiling using anchor plugs and 6 mm screws (not provided).




*1 Minimum clearance around the ventilation unit*

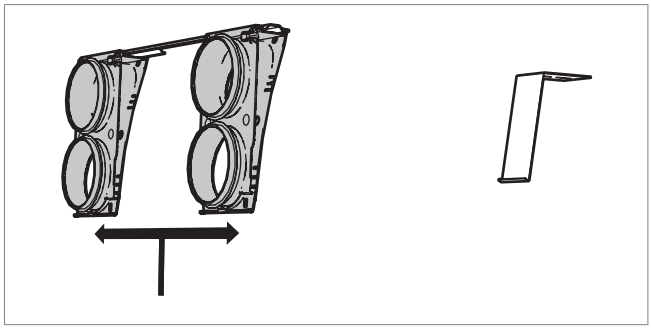
*2) Distance between hole centres*



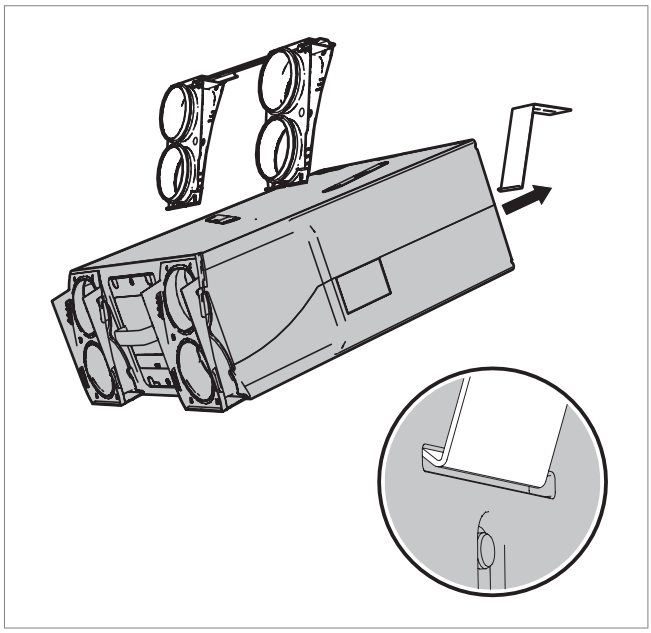
**Caution!**

There is only one way to insert the ventilation unit adapters into the duct adapters.

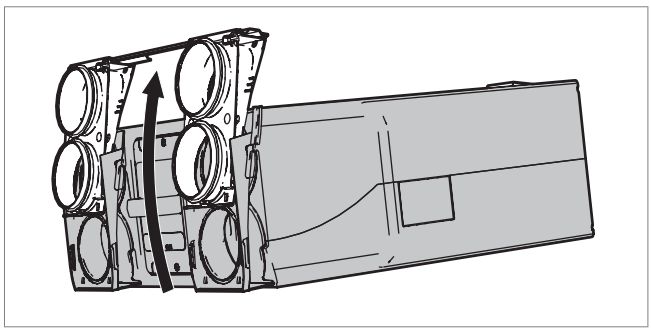
b) Slip the duct adapters back over the mounting bracket and push the two adapters to the left and to the right as far as they will go.



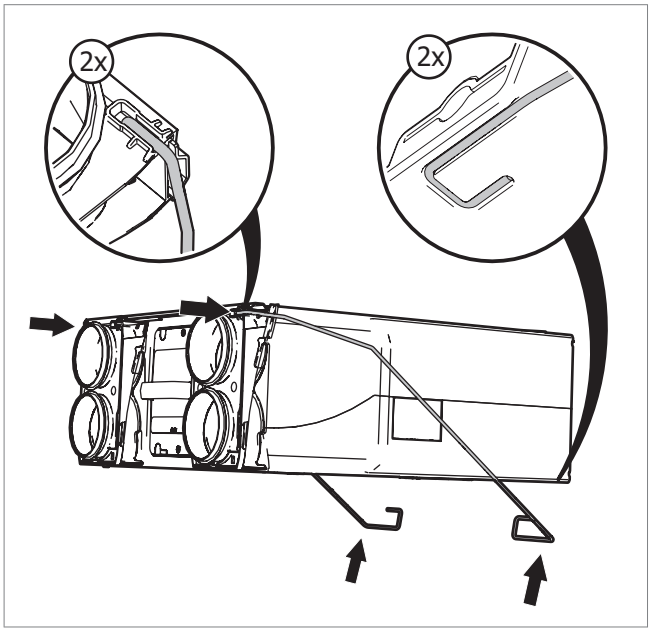
c) Place the ventilation unit in the ceiling mounting bracket, tilted forward slightly. There is a recess on the underside the EPP housing into which the bracket fits exactly.



d) Tilt the ventilation unit backwards so that the ventilation unit adapters slide under the duct adapters. When the adapters have been fully inserted into one another, you will hear a distinct click. This means the unit is firmly attached.

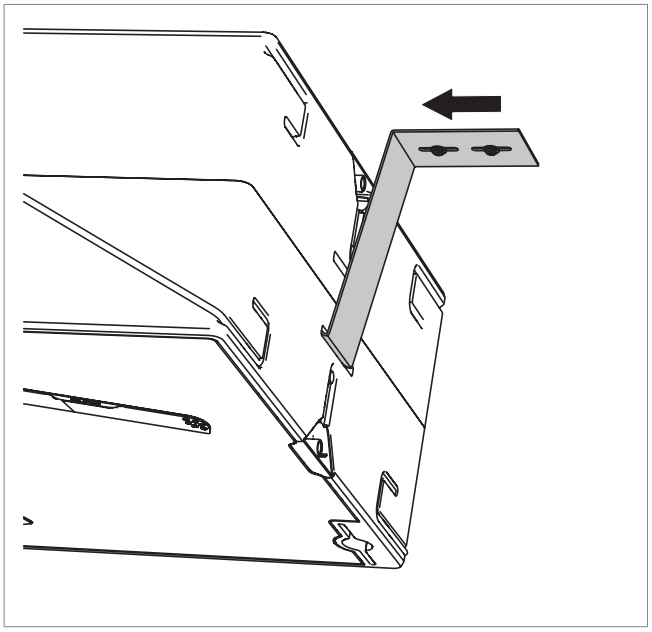


e) Now secure both wire brackets. First hook each bracket onto the outside of the duct adapter using the holes intended for this purpose, and then clip the underside of the bracket into the underside of the housing of the ventilation unit. There is a recess on the underside of the EPP housing into which the bracket fits exactly.




**Note**

The position of the ceiling bracket may need to be readjusted. To do so, loosen the screws a little and shift the bracket in the oversize holes.

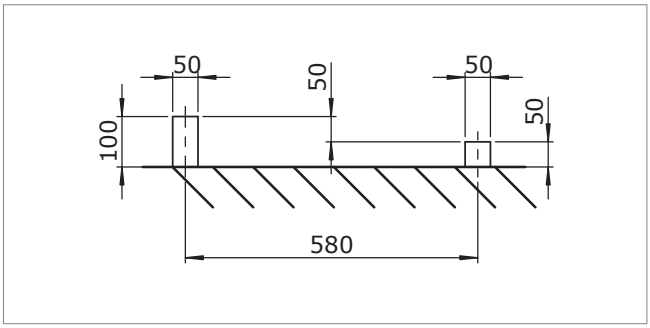


## 3.2.6. Floor mounting

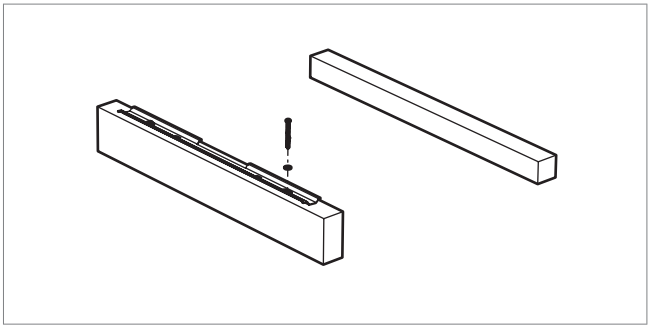
**Caution!**

With this mounting option, the ventilation unit needs to be mounted with enough tilt to ensure correct condensate drainage. It is also important to ensure that the condensate hose can be mounted with a slope from the ventilation unit to the condensate drain.

a) Attach two wooden laths (50 x 100 x 600 mm and 50 x 50 x 600 mm, not provided) to the floor as shown in the diagram below.



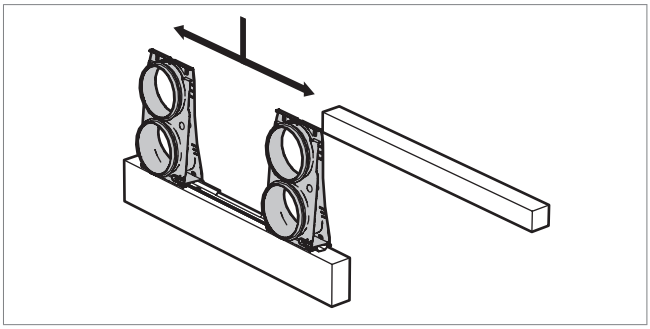

b) Secure the mounting bracket to the higher of the two laths using 6 mm screws (not provided).



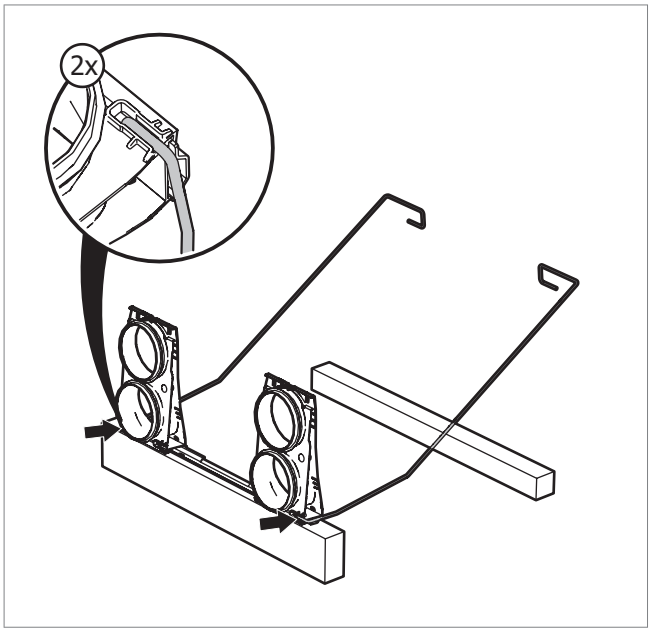
**Caution!**

There is only one way to insert the ventilation unit adapters into the duct adapters.

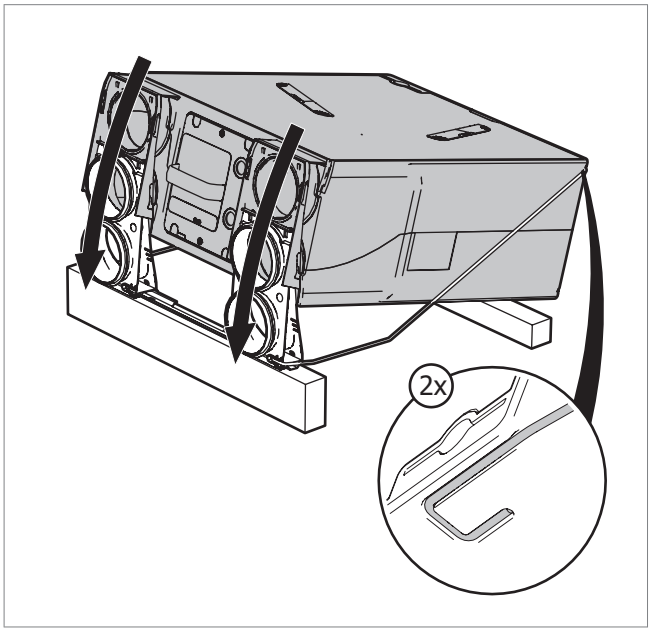
c) Slip the duct adapters back over the mounting bracket and push the two adapters to the left and to the right as far as they will go.



d) Hook the two wire brackets onto the outside of the duct adapters using the holes intended for this purpose.




e) Place the ventilation unit in the wire brackets, tilted forward slightly. There are recesses on the underside of the EPP housing into which the wire brackets fit exactly. When the adapters have been fully inserted into one another, you will hear a distinct click. This means the unit is firmly attached.




## 3.3. Connecting the condensate drain

**Caution!**

If the ventilation unit is situated outside the thermal shell of the dwelling (for example in a non-insulated attic), the condensate drain must be thermally insulated up to the ventilation unit.

During winter, moisture in the exhaust air from the dwelling may condense in the heat exchanger. The EPP housing therefore has a built-in drip tray with two condensate drain ports. With ceiling or floor mounting, the lower condensate drain port must be connected. With wall mounting, either condensate drain port can be used.

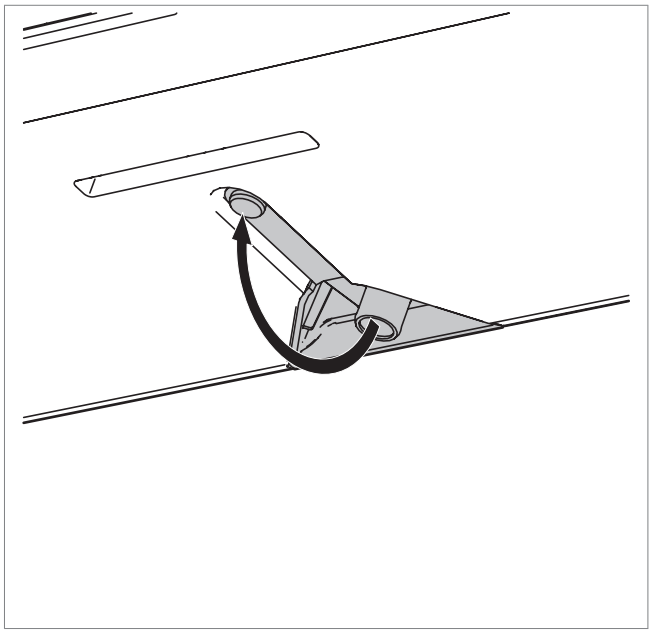
**Caution!**

Ensure that the condensate hose is mounted with a downward slope toward the drain.

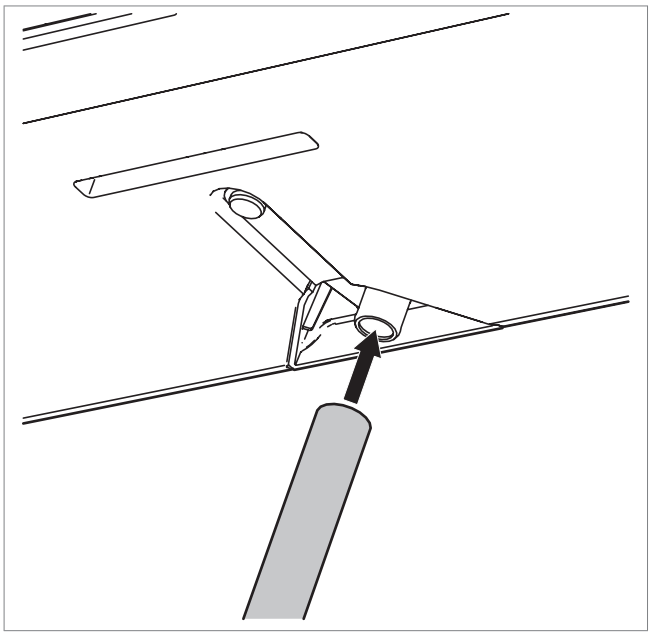
**Caution!**

The condensate hose should not have any sharp kinks in it.

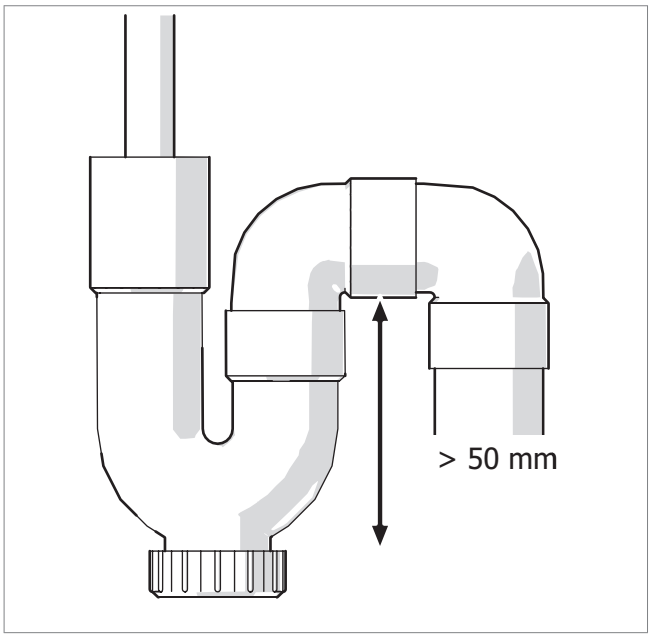
a) Open the condensate drain by pulling on the tab.



b) Slip the provided condensate hose over the condensate drain nozzle.



c) Route the condensate hose to a trap with a water level of least 50 mm. Ensure that the hose is inserted deep enough into the trap (minimum 30 mm below water surface).




d) Fill the trap with water.

## 3.4. Connecting the ducts

The Advance and Advance Plus have four nozzles at the top for connecting Ø 125 mm ducts. The nozzles are equipped with Leaksafe seals.

**Warning!**

When using the unit in multi-unit housing, it must be ensured at all times that there is no backflow into the dwelling from the central exhaust air duct. In this case, a mechanical check valve must be installed in the air outlet duct of the unit.

**Caution!**

In order to prevent condensation, the duct from outside and the duct leading outside must be thermally insulated and vapour-tight right up to the ventilation unit.

### 3.4.1. Supply air from outside

The ventilation unit draws in air from outside through this port. This duct must be thermally insulated and vapour-tight to prevent condensation from forming on the outside of the duct. If the ventilation system must keep running during winter (for frost protection), an external pre-heater with its temperature setpoint at -1°C must be used.

### 3.4.2. Exhaust air to outside

The ventilation unit feeds the exhaust air outside through this port. This duct must be thermally insulated and vapour-tight in order to prevent condensation from forming on the inside and outside of the duct. It is advisable to use a roof feedthrough that does not let in any condensation or rainwater. If it does, the components of the duct system between this outlet nozzle and the roof feedthrough must be watertight. Any condensation water will be discharged through the condensate drain of the unit.

### 3.4.3. Supply air to dwelling

The ventilation unit supplies warmed air to the dwelling through this port. For optimal comfort a silencer should be fitted on this nozzle.

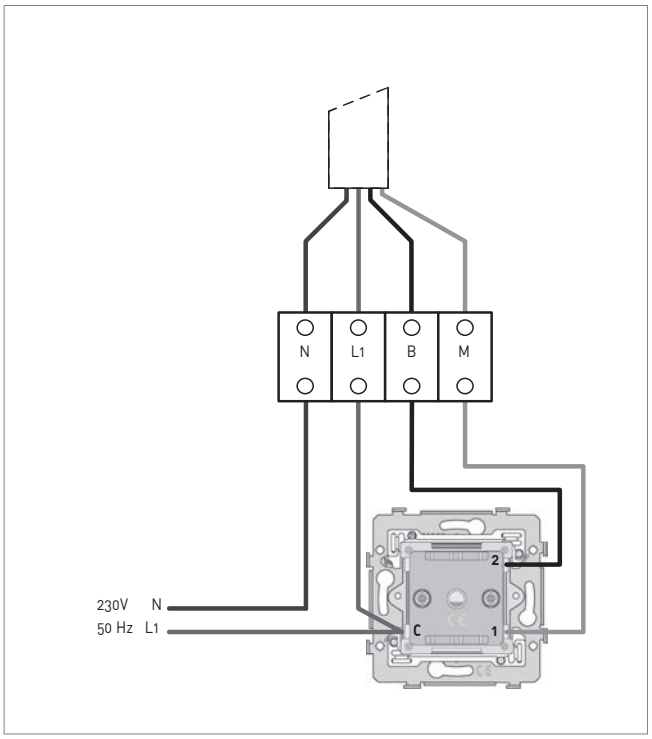
## 3.4.4. Exhaust air from dwelling

The ventilation unit draws exhaust air out of the dwelling through this port. This duct does not normally need to be thermally insulated. Thermally insulated and vapour-tight ductwork is only necessary if the ventilation unit is located outside the thermal shell of the dwelling (for example in a non-insulated attic). For optimal comfort a silencer should be fitted on this nozzle.

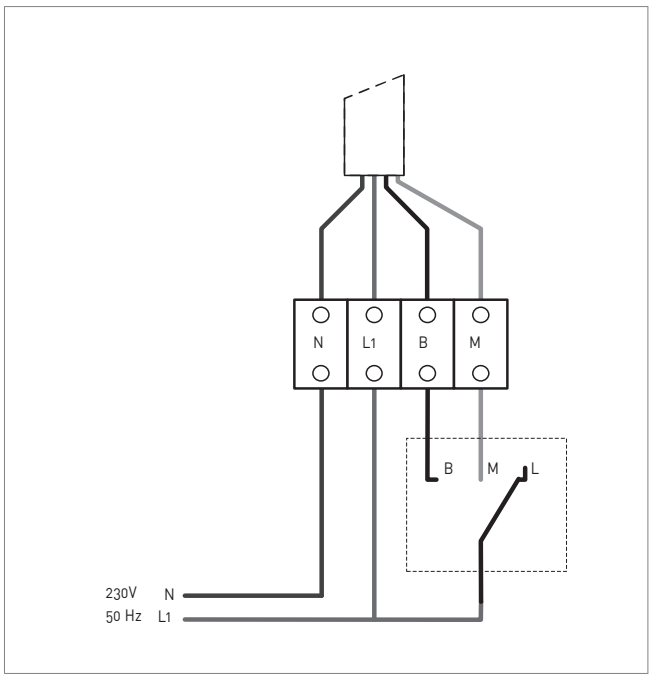
## 3.5. Electrical connection

The ventilation unit has a four-wire cable. The ventilation unit is double insulated and is therefore not earthed.

If the HRS-3 wired three-position switch is used for speed control, connect the wires as shown in the diagram below.




If another type of wired switch is used for speed control, connect the wires as shown in the diagram below.




| Wire | Colour | Mode | Function | Connection |
|---|---|---|---|---|
| N | blue | — | neutral | mains supply |
| L1 | brown | low | phase | mains supply / switch |
| L | brown | — | switch | switch/unit |
| M | grey | medium/ auto | switch | switch/unit |
| B | black | high | switch | switch/unit |

# 4. Operation

## 4.1. Control options

The ventilation unit has several pre-programmed modes. A number of control switches are available for actively setting the correct mode/ventilation capacity:

- Wireless RF-VI remote control with LED indicator for status and ventilation functions
- Wireless RF control switch with three settings and a timer function
- Wireless RF control switch with two settings, an automatic setting and a timer function
- Conventional wired switch with three settings
- A combination of the above options.

For pairing or unpairing a wireless RF remote control with/from the unit, consult Pairing and unpairing RF remote controls on page 27

**Note**

Do not attach wireless control switches to metal surfaces. This can interfere with the wireless control switch or cause it to stop working entirely.

**Note**

The wireless control switches have a range of 100 metres in free space (no obstacles). The distance at which the switch can function properly is reduced depending on the obstacles interfering with the signal.

**Note**

When using a wireless control switch in the bathroom, it should not be located in zone 0 (floor of the shower base) or zone 1 (up to 2.5 metres above the shower base) due to the effects of moisture.

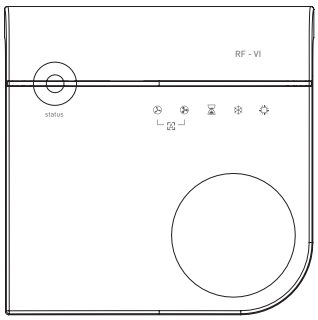
**Caution!**

If the fan runs at high speed when low speed is selected or at low speed when high speed or timer mode is selected, the ventilation unit is faulty.

See Faults on page 36 for possible causes of problems and potential solutions.

## 4.2. RF-VI wireless remote control

This RF-VI wireless remote control always displays the status of the ventilation unit with which it is paired.




The three-colour LED (Status) on the RF-VI indicates the status of the ventilation unit.

- Red (continuously blinking once per second) = RF-VI not paired
- Red (continuously blinking in error code pattern) = Ventilation unit is reporting an error (see error code table in the RF-VI manual)
- Orange (continuously on) = Dirty filter
- Green (continuously on) = No errors, filter okay (everything in order)
- White (continuously blinking once per second) = The RF-VI is paired but has not been in communication with the ventilation unit for one hour

If you press and hold the touch button for 10 to 12 seconds * during normal operation (until the three-colour LED flashes orange), the RF-VI sends a "Reset dirty filter" message (3 times).

** If the button is held for longer than 12 seconds, the three-colour LED will go dark and nothing will happen.*

The user can switch between ventilation modes by pressing the touch button. Each time it is pressed, the mode switches to the next one in the cyclical order shown below. The corresponding LED is lit (green).

| LED | Activity | Meaning |
|---|---|---|
| | On | Ventilation unit in Mode 1 |
| | On | Ventilation unit in Mode 2 |
| | On | Ventilation unit in Auto Mode |
| | On/ blinking | Ventilation unit is in Mode 3 or Timer Mode * |
| Above signals off | | Ventilation unit is in Not at Home Mode |
| | On | Frost control of the ventilation unit is active |
| | On | Bypass control of the ventilation unit is active ** |

** When timer mode is selected, the corresponding LED blinks for 10 seconds in a particular pattern (see RF-VI manual) and then stay lit continuously*

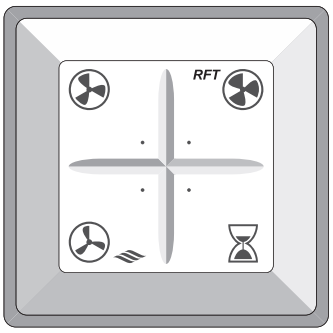
*** Only applies to Advance Plus*

Usually, the RF-VI interface is always switched on. The interface can also be switched off for normal operation, and all LEDs automatically go out after this is done.

- If the touch button is held for 5 seconds during normal operation (the RF-VI has been on for more than 2 minutes), all LEDs will go out and the interface will be switched off.
- If the interface is off and the touch button is pressed briefly, the active LEDs will light up for 10 seconds, after which the interface will switch off again.
- If the interface is off and the touch button is pressed for 5 seconds, the interface will switch on again and the ventilation unit information will be displayed.
- Error messages and the dirty filter message are always displayed, regardless of whether the interface is on or off.
- The interface setting (on or off) is recorded in the memory of the RF-VI.

## 4.3. Wireless control switch with timer

This wireless RF control switch can easily be placed in any room by applying double-sided tape to the back of the switch.




This wireless control switch allows you to select the ventilation speed (capacity) of the unit:

| | |
|---|---|
| | Level 1, **low speed**; when one person is present during the day or night, or when no-one is present. |
| | Level 2, **medium speed**; during the day or night when more than one person is present. |
| | Level 3, **high speed**; during cooking, showering or bathing, or when a lot of people are present. |
| | **Timer**; high speed for switching the unit to high speed for an adjustable period. |

High speed remains active for a maximum of 24 hours, after which the unit switches back to medium or low speed, depending on which of these was selected last.

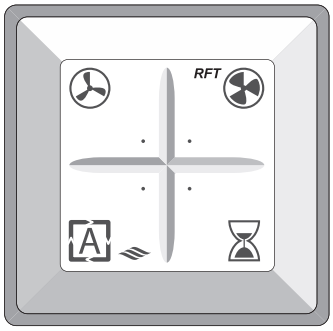
Once the timer has run out, the unit switches back to the last selected speed before the timer was started, unless that was high speed. In that case the unit switches back to medium or low speed, depending on which of these was selected last.

The duration of the timer can be set as follows:

- Press the timer button once: 10 minutes at high speed
- Press the timer button twice: 20 minutes at high speed
- Press the timer button three times: 30 minutes at high speed.

The timer can be stopped at any time by pressing the button for low, medium or high mode.

## 4.4. Wireless control switch with automatic control/timer




This wireless control switch allows you to select the ventilation speed (capacity) of the unit:

| | |
|---|---|
| A | Auto setting, **automatic mode**; sensor-based control ($CO_2$, RV and/or PIR). The capacity is regulated between low and high. |
| | Level 1, **low speed**; when one person is present during the day or night, or when no-one is present. |
| | Level 3, **high speed**; during cooking, showering or bathing, or when a lot of people are present. |
| | **Timer**; high speed for switching the unit to high speed for an adjustable period. |

High speed remains active for a maximum of 24 hours, after which the unit switches back to medium or low speed, depending on which of these was selected last.

Once the timer has run out, the unit switches back to the last selected speed before the timer was started, unless that was high speed. In that case the unit switches back to medium or low speed, depending on which of these was selected last.

The duration of the timer can be set as follows:

- Press the timer button once: 10 minutes at high speed
- Press the timer button twice: 20 minutes at high speed
- Press the timer button three times: 30 minutes at high speed.

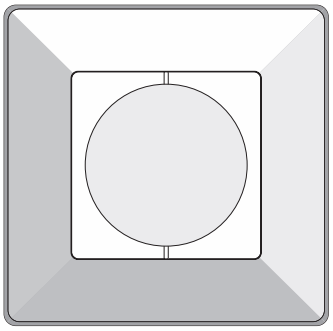
The timer can be stopped at any time by pressing the button for low speed, high speed or automatic mode.

**Note**

If sensors have been paired with the ventilation unit, low speed or high speed will remain active for a maximum of one day, after which automatic mode will be activated.

## 4.5. Wired three-position switch

This control switch is connected directly using connecting wires. The wired control switch can be combined with one or more wireless control switches.



Using the wired three-position switch, the unit can be put into three different ventilation modes (capacities) by turning the switch:

| | |
|---|---|
| 1 | Level 1, **low speed**; when one person is present during the day or night, or when no-one is present. |
| 2 | Level 2, **medium speed**; during the day or night when more than one person is present. |
| 3 | Level 3, **high speed**; during cooking, showering or bathing, or when a lot of people are present. |

High speed remains active for a maximum of 24 hours, after which the unit switches back to medium or low speed, depending on which of these was selected last.

**Note**

If the wired control switch is combined with a wireless control switch, there is a risk that the ventilation unit may be set to high by the wired switch and then to low by the wireless switch. In this case, the wired switch will indicate high speed when the ventilation unit is actually running at low speed.
In order to re-activate the wired control switch in this situation, you should first switch it to another speed.

**Note**

For ventilation units with which sensors have been paired ($CO_2$, RV and/or PIR), Mode 2 operates as an automatic mode.

**Note**

If sensors have been paired with the ventilation unit, low speed or high speed will remain active for a maximum of one day, after which automatic mode will be activated.

## 4.6. Pairing and unpairing RF remote controls

### 4.6.1. Pairing an RF-VI remote control

Consult the manual supplied with the RF-VI for information on pairing this wireless remote control.

### 4.6.2. Pairing RF remote controls

It is best to pair wireless switches with a ventilation unit in the vicinity of that unit.

a) Disconnect power to the ventilation unit.
b) Wait for at least 15 seconds.
c) Restore power to the ventilation unit.
d) Within two minutes after powering up the ventilation unit, press two diagonally opposite buttons on the RF control switch at the same time.

The control switch is paired, and the ventilation unit briefly changes the motor speed to confirm the pairing. The ventilation unit is now ready to be operated using the wireless control switch.

### 4.6.3. Unpairing an RF-VI remote control

Consult the manual supplied with the RF-VI for information on unpairing this wireless remote control.

### 4.6.4. Unpairing RF remote controls

It is best to unpair wireless RF remote controls from a ventilation unit in the vicinity of that unit.

a) Disconnect power to the ventilation unit.
b) Wait for at least 15 seconds.
c) Restore power to the ventilation unit.
d) Within two minutes after powering up the ventilation unit, press the four buttons on the control switch at the same time.

The ventilation unit will now no longer respond to the wireless control switch(es). Unpairing one control switch automatically unpairs *all* control switches, controls and RF sensors.

**Note**

If several wireless switches, controls and/or RF sensors were paired with the unit in question, they must be individually re-paired after being unpaired.

## 4.7. Pairing and unpairing RF sensors

### 4.7.1. Pairing RF sensors

Pair wireless sensors with the ventilation unit as follows:

a) Disconnect power to the ventilation unit.
b) Wait for at least 15 seconds.
c) Restore power to the ventilation unit.
d) Ensure that a pairing message is sent from the RF sensor within two minutes after power to the ventilation unit is switched on. For more information, consult the documentation for the relevant sensor.

The RF sensor is paired, and the ventilation unit briefly changes the motor speed to confirm the pairing. The ventilation unit is now ready to respond to the signals of the wireless sensor.

### 4.7.2. Unpairing RF sensors

RF sensors can only be unpaired at the same time as an RF remote control. For more information, see the procedure Unpairing an RF-VI remote control or Unpairing RF remote controls on page 27.

**Note**

If several wireless switches, controls and/or RF sensors were paired with the unit in question, they must be individually re-paired after being unpaired.

# 5. Commissioning

## 5.1. Preparation

Before commissioning

- The ventilation unit and accessories must be assembled.
- The duct system must be assembled.
- The condensate drain must be installed and the trap must be filled with water.
- All exterior and interior doors and windows must be shut.
- There must be enough space for air flow beneath the interior doors.
- The adjustable valves in *all* rooms must be fully opened.

**Caution!**

Increasing the maximum motor speed results in increased noise levels and energy consumption.

**Caution!**

Before the wireless control switch can be paired, the ventilation unit must have been switched off for 15 seconds.

**Caution!**

If the power supply is cut during the commissioning phase, you must wait for two minutes after the power has been restored. All ventilation units in the immediate area will be in pairing mode for the first two minutes.

**Note**

Every RF remote control and/or RF sensor must be paired separately. You can pair and use up to 20 RF devices.

**Note**

If you cannot finish pairing RF remote controls and/or RF sensors within two minutes, then you can put the ventilation unit back into pairing mode by disconnecting power, waiting 15 seconds, and then restoring power. Any remote controls already paired with the ventilation unit will remain paired.

## 5.2. Putting into service

Follow the steps below to correctly put the ventilation unit into service:

a) Ensure that the ventilation unit has been switched off for 15 seconds.

b) Switch the ventilation unit on again.

c) Pair available wireless remote controls as described in Pairing an RF-VI remote control on page 27 or Pairing RF remote controls on page 27.

d) Pair any available optional sensors as described in Pairing RF sensors on page 27.

**Note**

After it is switched on, the ventilation unit remains in pairing mode for two minutes. During this time, you can pair RF remote controls. However, during this period the ventilation unit will respond to **all** pairing requests within its range. If several ventilation units located close together are being commissioned **simultaneously**, remote controls may unintentionally be paired with **all** ventilation units. As a result, your ventilation system will still respond to your own RF remote control, but may also respond to that of a neighbouring property.

**Caution!**

If the RF remote control from a neighbouring property is unintentionally paired with your ventilation system, you can resolve the problem by switching off your ventilation unit for 15 seconds. Once the ventilation unit has switched on again, you must unpair and then re-pair any already paired remote controls. Unpairing one remote control also unpairs all the rest, including those in the neighbouring property.

## 5.3. Adjusting the capacity

**Caution!**

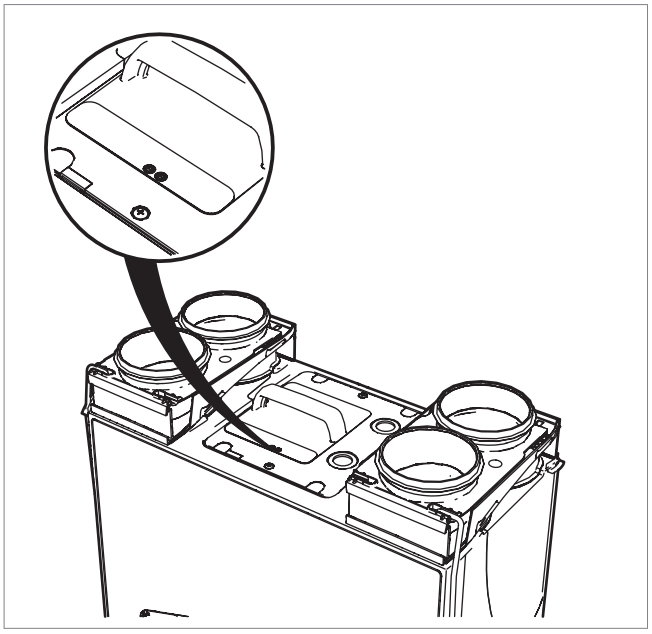
The capacities (high and low) of the ventilation unit must be set up during commissioning.

**Note**

If the capacity needs to be increased, first try opening the air valves more to see if this helps achieve the required capacity. Increasing the motor speed results in higher energy consumption and an increased noise level.

The high and low speed settings are the same for supply and exhaust air because both fans in the ventilation unit are driven by the same motor.

On top of the ventilation unit there are two potentiometers for adjusting the minimum and maximum capacity of the unit, which means the flow rate at low and high speed. The design calculations for the system or flow rate measurements will indicate whether these capacities need to be adjusted.



### 5.3.1. High speed setting

If necessary, adjust the high speed setting with the right-hand potentiometer. This potentiometer is set to 125 $m^3/h$ by default. The adjustment range goes from 75 to 150 $m^3/h$ (at 150 Pa).

### 5.3.2. Low speed setting

If necessary, adjust the low speed setting with the left-hand potentiometer. This potentiometer is set to 50 $m^3/h$ by default and has a lower limit so that it is not possible to have insufficient ventilation. The adjustment range is 25 to 75 $m^3/h$.

**Note**

The adjustment ranges for low and high speed are chosen so that the maximum capacity at low speed is the same as the minimum capacity at high speed. When the low and high speed settings are the same, there is no difference in capacity between the three modes (low, medium and high).

**Caution!**

Only adjust the potentiometer for high mode when the ventilation unit is loaded (connected to a duct system). If you adjust it when the ventilation unit is unloaded ("free discharge"), the current consumption may become too high. Current limiting on the circuit board will then cause irregular and jerky motor operation.

# 6. Inspection and maintenance

Proper functioning of the ventilation unit, its effectiveness and its service life can only be assured if the system is inspected and maintained in accordance with the provisions below. These provisions are based on normal operating conditions.

**Caution!**

If the ventilation system is being used under harsh operating conditions or in a very dirty environment, extra maintenance may be required.

## 6.1. Inspection and maintenance schedule

| Inspection schedule Advance and Advance Plus | | User | Installer |
|---|---|---|---|
| **Noise** | Check for unusual noises coming from the ventilation unit, air valves and ducts | 6 months | 1 year |
| **Filter G3** | Check for soiling | 1 week | — |
| **Filter G4** | | 9 months | 1 year |
| **Filter F7** | | 6 months | 1 year |
| **Ventilation unit** | Check for soiling and condensation leakage | 6 months | 1 year |
| **Motor module** | Check for soiling/imbalance | — | 1 year |
| **Bypass valve** * | Check functioning and for soiling | — | 1 year |
| **Air valves** | Check for soiling | 3 months | 1 year |
| **Ducts** | Check for soiling | — | 4 years |

* *Only applies to Advance Plus*

| Maintenance schedule for Advance and Advance Plus | | User | Installer |
|---|---|---|---|
| **Filter G3** | Clean (first 3 months) | 1 week | Where necessary |
| | Replace (with G4 or F7) | 3 months | Where necessary |
| **Filter G4** | Clean | 9 months | Where necessary |
| | Replace | 18 months | Where necessary |
| **Filter F7** | Clean | 6 months | Where necessary |
| | Replace | 12 months | Where necessary |
| **Ventilation unit** | Clean outside | 3 months | 1 year |
| | Clean condensate hose | — | 1 year |
| **Motor module** | Clean | — | 4 years |
| **Bypass valve*** | Clean | — | 1 year |
| **Air valves** | Clean | 3 months | 1 year |
| **Ducts** | Clean | — | 8 years |
| **Battery for RF remote control** | Replace | Where necessary | Where necessary |

* *Only applies to Advance Plus*

**Note**

It is not possible to remove the heat exchanger from the ventilation unit. Under normal conditions, and if the correct filters are used, it should not be necessary to clean the heat exchanger.

## 6.2. Check for unusual noises

If the ventilation unit produces unusual noises or vibrations, this may indicate that the motor module or bypass valve is faulty. Consult Inspecting and cleaning the fan on page 31 and/or Inspecting and cleaning the bypass valve on page 32 to determine the cause and resolve the problem.

## 6.3. Inspecting and cleaning the fan

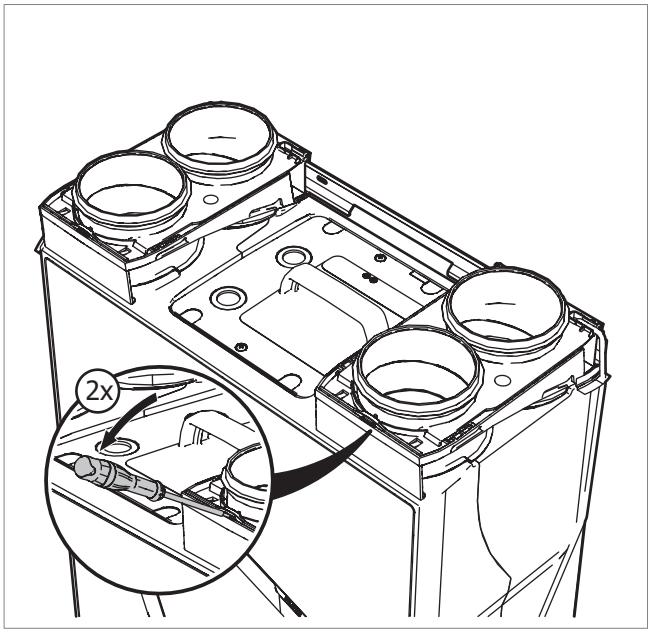
**Caution!**

If the unit is ceiling mounted, be careful to avoid being hit by swinging wire brackets when removing the ventilation unit.

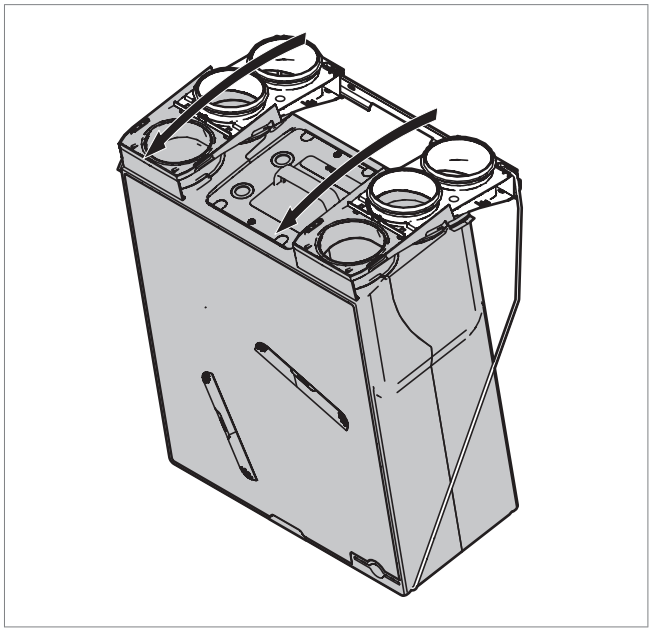
Follow the steps below when inspecting and cleaning the fan:

a) Disconnect power to the ventilation unit.

b) Unlock the duct adapters using a screwdriver.

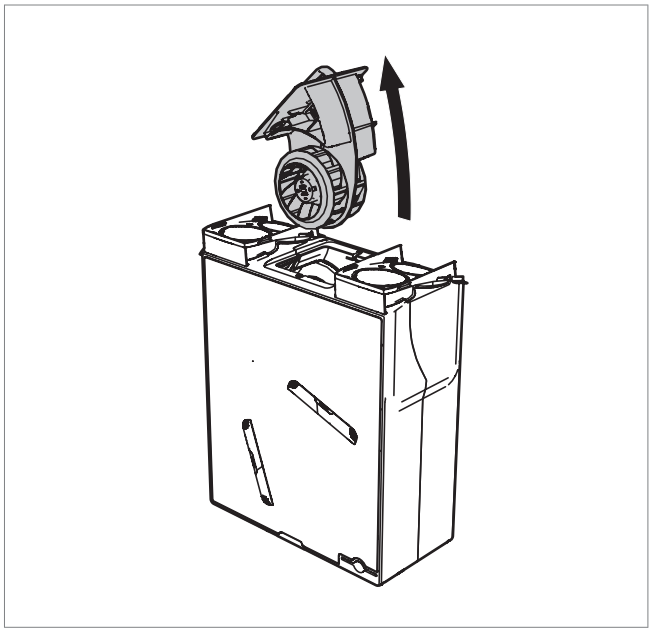



c) Tilt the ventilation unit away from the wall, ceiling or floor. Then carefully remove the unit from the wire brackets and place it on the floor.



d) Unscrew the screws attaching the motor module to the housing and remove the screws.

e) Take the whole motor module including fans out of the ventilation unit. To do so, use the handle on the motor module.



f) Inspect the blades of both impellers and clean them if necessary (see next step).

g) Clean both fan impellers carefully with a vacuum cleaner.

**Caution!**

When cleaning the fan make sure the balancing clamps have not been displaced or come loose.

h) Check whether the fan is still balanced by spinning one of the two impellers. If the impellers wobble significantly (and this is causing noise problems), the entire motor module must be replaced.

i) Install the motor module and ventilation unit in reverse order, and put the ventilation unit back into operation by switching on the power. If the unit is ceiling mounted, the wire brackets should be refitted last (also see Ceiling mounting on page 19).

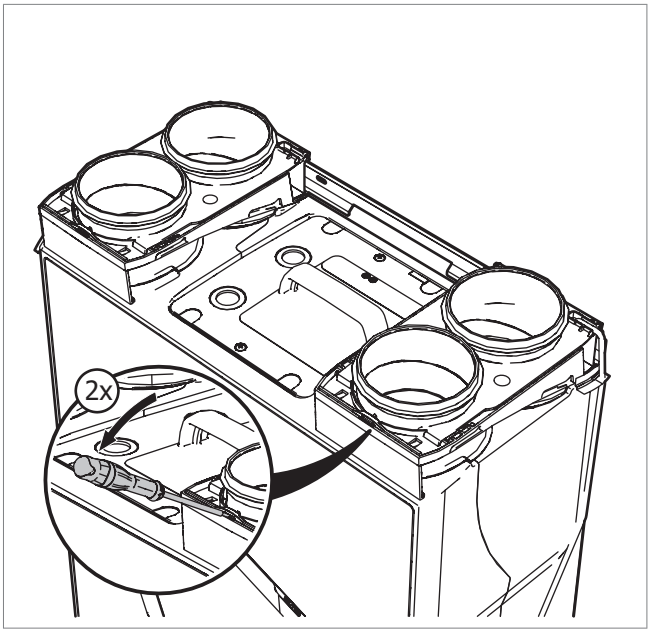
## 6.4. Inspecting and cleaning the bypass valve

**Note**

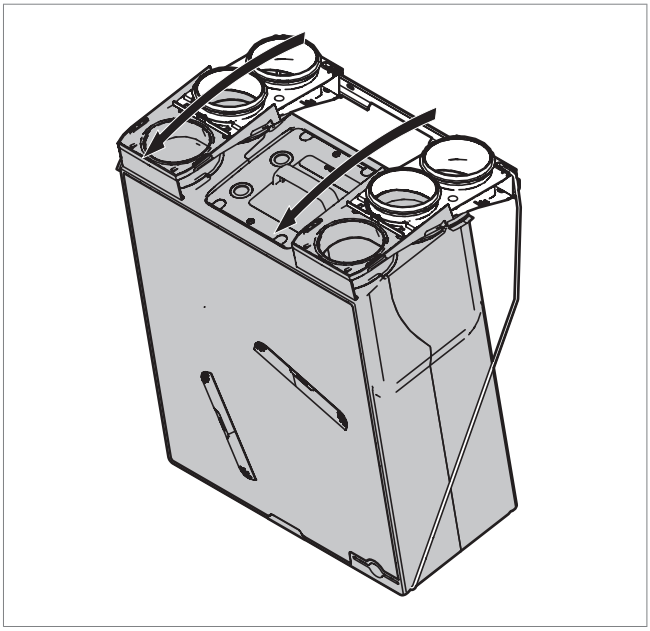
The procedure below only applies to the Advance Plus.

a) Disconnect power to the ventilation unit.

b) Unlock the duct adapters using a screwdriver.




c) Tilt the ventilation unit away from the wall, ceiling or floor. Then carefully remove the unit from the wire brackets and place it on the floor.

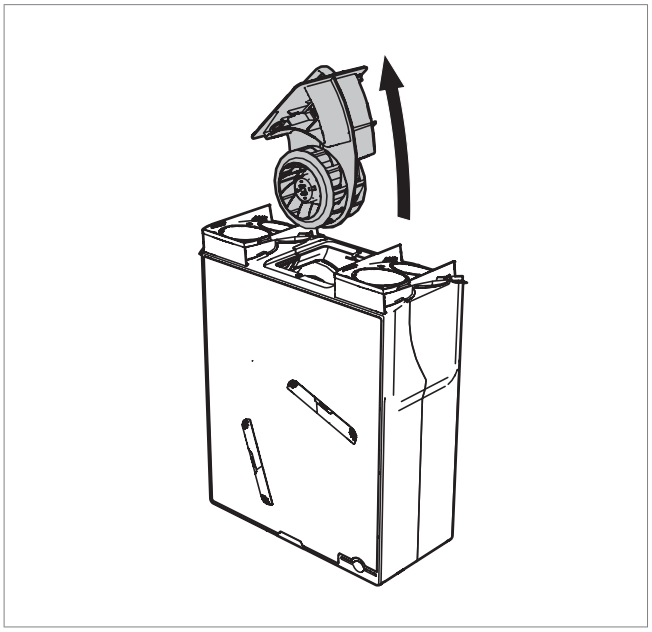


**Caution!**

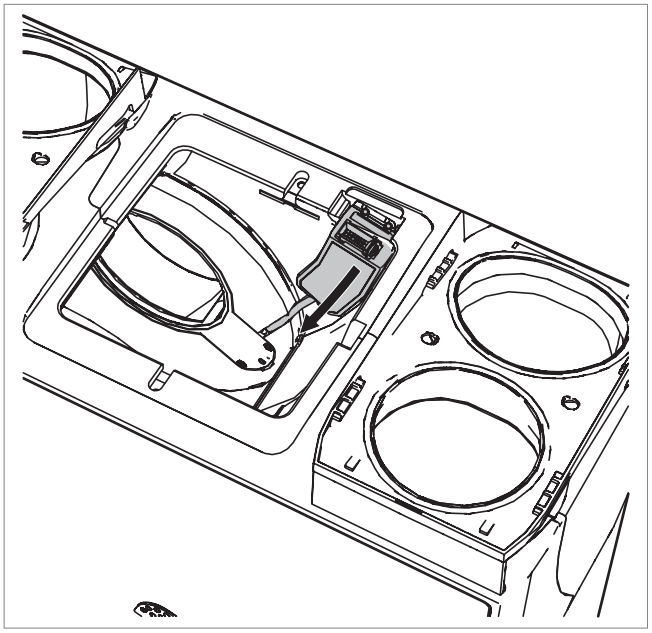
If the unit is ceiling mounted, be careful to avoid being hit by swinging wire brackets when removing the ventilation unit.

d) Unscrew the screws attaching the motor module to the housing and remove the screws.

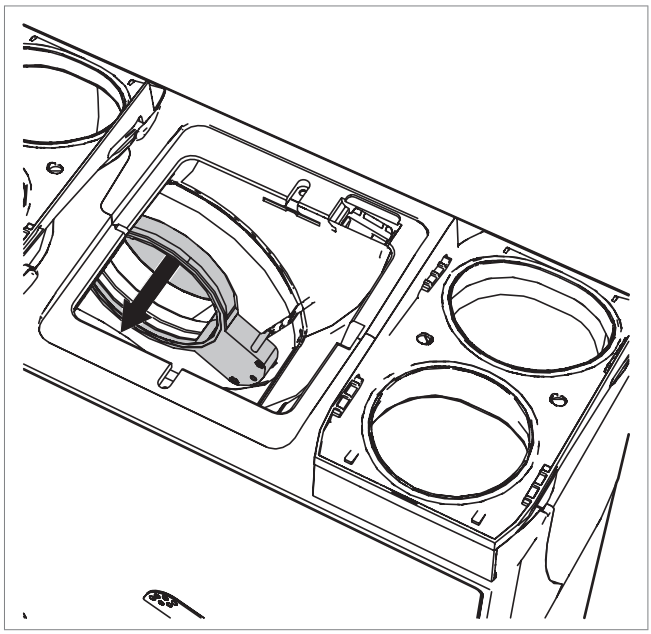
e) Take the whole motor module including fans out of the ventilation unit. To do so, use the handle on the motor module.



f) Remove the yellow cable bracket from the EPP housing, and carefully remove the cable from the cable channel.

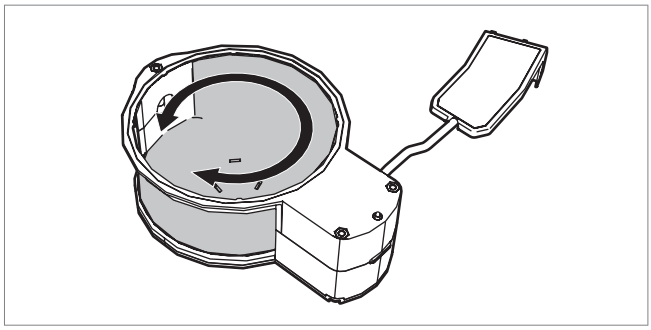


g) Now, carefully pull the bypass valve out of the EPP housing. There are two finger-holes in the valve for this purpose.



h) First clean the bypass valve using a vacuum cleaner to remove most of the debris. Then you can clean it with a soft brush or a duster.

i) Check whether the valve can still turn freely by rotating the valve part. If the valve cannot be moved, the whole bypass valve must be replaced.



j) Mount the bypass valve, motor module and ventilation unit in reverse order, and put the ventilation unit back into service by restoring power. If the unit is ceiling mounted, the wire brackets should be refitted last (also see Ceiling mounting on page 19).

**Warning!**

When refitting the bypass valve, make sure that it is pushed right in until it is flush with the EPP housing. If the valve housing is protruding, this may obstruct the fan and damage it.

## 6.5. Inspecting, cleaning and replacing filters

**Note**

The ventilation unit comes with G3 filters as standard. These filters are very suitable for use as "construction dust filters" after initial completion of the dwelling. After around three months, these filters should be replaced with G4 or F7 filters.

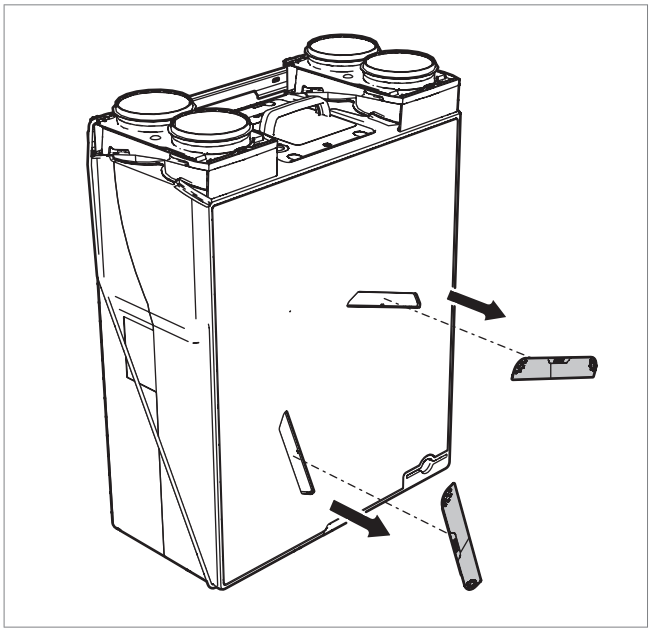
**Caution!**

G4 and F7 filters can be cleaned once, after which they must be replaced at the next maintenance interval.

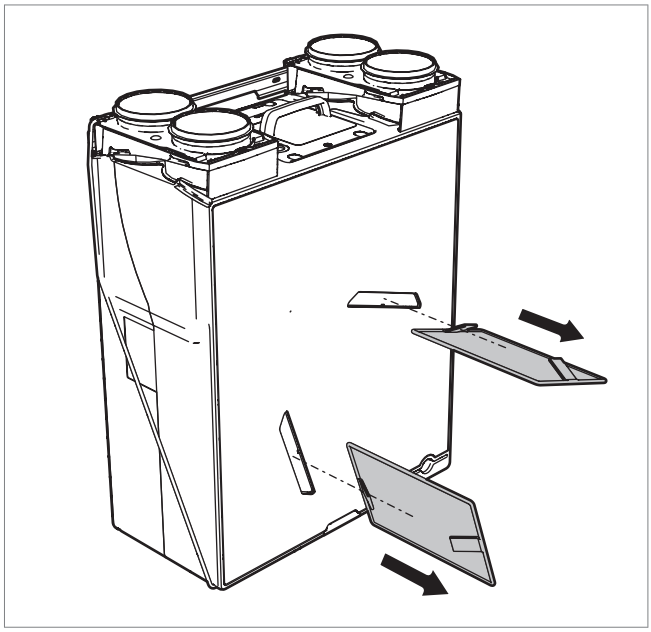
Inspect and clean or replace the filters as follows:

a) Disconnect power to the ventilation unit.

b) Pull both filter caps out of the front panel.



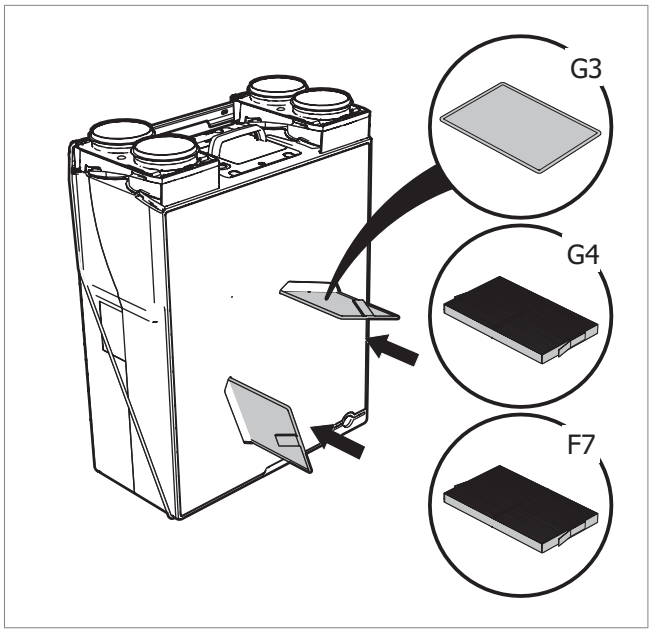
c) Remove the filters from the ventilation unit. There are tabs at the front of the filters for this purpose.



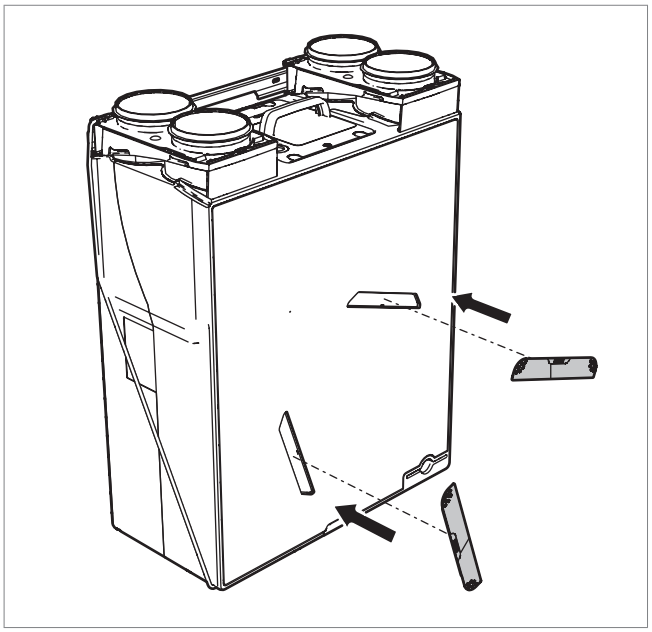
d) Visually inspect the filters for soiling. If the filters are dirty, they must be cleaned or replaced.

e) Clean or replace the filters. To clean the filters, gently tap them to remove the dirt or use a vacuum cleaner.

f) Insert the cleaned filters or new filters in the ventilation unit.



g) Put both filter covers back in the front panel.



h) Put the ventilation unit back into operation by switching on the power.

## 6.6. Maintenance

The RF-VI remote control is mains powered, so it does not have any batteries that need to be replaced. The only maintenance to be done consists of cleaning the outside of the device with a damp cloth if necessary. Do not use chemical cleaning agents.

## 6.7. RF remote control maintenance

The RF remote control is battery powered. Under normal use conditions, the battery has an estimated service life of around 10 years. Once the battery is empty, the remote control will no longer work, and it will no longer be possible to manually operate the ventilation unit. At this point, the battery (CR2032) must be replaced. It is not necessary to re-pair the remote control.

## 6.8. Inspection of additional RF sensors

For inspection and maintenance of the RF-RH sensor, the RF-PIR sensor or the RF $CO_2$ sensor, consult the information provided with the relevant sensor.

## 6.9. Inspecting and cleaning air valves

Check the air valves regularly (around once every three months) for soiling. If the air valves are dirty, they must be cleaned.

**Caution!**

When removing or replacing air valves and grilles, watch out for protruding duct sections. These can be very sharp.

**Caution!**

When cleaning, do not adjust the air valve settings, and replace the valves in their original ducts.

## 6.10. Inspecting/cleaning ducts

It is advisable to check the ducts in the housing once every four years. The ducts must be cleaned once every eight years.

# 7. Faults

| The fan has stopped | |
|---|---|
| Cause | Solution |
| a) The frost protection system is active. | • When the outside temperature rises above -1°C, the fan will start running again.<br>• Install a pre-heater in the supply duct for outside air. |
| b) The power is switched off. | • Switch the power back on. |
| c) No power. | • Restore power. |
| d) The fan is blocked or stuck due to heavy soiling. | • Clean the fan impeller. Watch out for the balance clips. |
| e) The fan is defective. | • Replace the entire motor module. |
| f) The ventilation unit PCB is faulty. | • Replace the PCB and carry out the commissioning procedure again. |

| The ventilation unit is noisy | |
|---|---|
| Cause | Solution |
| a) The fan is blocked or stuck due to heavy soiling. | • Clean the fan impeller. Watch out for the balance clips. |
| b) The fan is imbalanced. | • Replace the entire motor module. |
| c) The unit is mounted on a wall/ceiling/floor with insufficient load-bearing capacity. | • If the ventilation unit cannot be relocated, try using vibration dampers to decouple it from the wall, ceiling or floor. |
| d) The ducts are not correctly connected to the unit. | • Check the connections and ensure that fixed ducts are clamped to the wall, ceiling or floor. |
| e) The second condensate drain is open and not connected (hissing sound). | • Close the second condensate drain by folding back the tab with the plug and clicking it into the condensate drain. |
| f) The bypass valve is blocked (rattling noise). (*) | • Inspect the valve. Clean it if it has become blocked with dirt. Replace the valve if there is a different cause of the fault. |

(*) *Applies exclusively to Advance Plus*

| The ventilation unit is not responding to the RF sensors (PIR sensor, 230 V $CO_2$ sensor, RV sensor) | |
|---|---|
| Cause | Solution |
| a) The system is not in Auto mode. | • If desired, place the system in Auto mode. |
| b) The frost protection system is active. | • When the outside temperature rises above -1°C, the fan will start running again.<br>• Install a pre-heater in the supply duct for outside air. |
| c) With a 230 V RF-$CO_2$ sensor: no power to the sensor. | • Check whether power has been switched off or interrupted. Restore power. |
| d) If using an RF-RH or RF-PIR sensor: the RF sensor battery is empty. | • Replace the battery. |
| e) The RF sensor is not paired with the ventilation unit. | • Restart the commissioning procedure and pair the RF sensor. |
| f) The distance between the ventilation unit and the RF sensor is too large, or there are too many obstacles interfering with the signal. | • Try pairing the devices again. If this does not work, move the RF sensor to a location where there are fewer obstacles. |
| g) The OEM codes of the RF sensor and the ventilation unit are different. | • Replace the RF sensor with one that has the correct OEM code.<br>• Replace the motor module PCB with a PCB that has the correct OEM code. |
| h) The RF sensor is faulty. | • Replace the RF sensor and re-pair it with the unit. |
| i) The ventilation unit PCB is faulty. | • Replace the PCB and carry out the commissioning procedure again. |

| The ventilation unit is not responding to the RF remote controls | |
|---|---|
| Cause | Solution |
| a) The frost protection system is active. | • When the outside temperature rises above -1°C, the fan will start running again.<br>• Install a pre-heater in the supply duct for outside air. |
| b) The battery of the RF remote control is empty. | • Replace the battery. |
| c) The RF remote control is not paired with the ventilation unit. | • Restart the commissioning procedure and pair the RF remote control. |
| d) The distance between the ventilation unit and the RF remote control is too large or there are too many obstacles interfering with the signal. | • Try pairing the devices again. If this does not work, move the RF remote control to a location where there are fewer obstacles to interfere with it. |
| e) The OEM codes of the RF remote control and the ventilation unit are different. | • Replace the RF remote control with one that has the correct OEM code.<br>• Replace the motor module PCB with a PCB that has the correct OEM code. |
| f) The ventilation unit PCB is faulty. | • Replace the PCB and carry out the commissioning procedure again. |

| The fan runs at high speed when low speed is selected and at low speed when high speed or timer mode is selected | |
|---|---|
| Cause | Solution |
| a) One of the RF sensors has a problem. | • See table "The ventilation unit is not responding to the RF sensors". |
| b) One of the ventilation unit's internal temperature sensors is faulty. | • Replace the faulty temperature sensor. |

| The fan suddenly starts running much faster or slower (for no apparent reason) | |
|---|---|
| Cause | Solution |
| a) After using the timer function, the ventilation unit switches back to the last selected speed before the timer was started. | • If desired, change the system setting. |
| b) If sensors have been paired with the ventilation unit, it switches back to automatic mode 24 hours after being set to low or high speed. | • If desired, change the system setting. |
| c) The RF remote control from a neighbouring property is paired with *this* ventilation unit. | • Disconnect power to the ventilation unit for 15 seconds. Unpair any paired RF remote controls (and any RF sensors) and re-pair the remote controls (and any RF sensors). |

| The ventilation unit is not responding to the three-position switch | |
|---|---|
| Cause | Solution |
| a) The frost protection system is active. | • When the outside temperature rises above -1°C, the fan will start running again.<br>• Install a pre-heater in the supply duct for outside air. |
| b) The power is switched off. | • Switch the power back on. |
| c) No power. | • Restore power. |
| d) The switch wires of the three-position switch are connected incorrectly. | • Connect the switch wires correctly (see wiring diagram). |
| e) The ventilation unit PCB is faulty. | • Replace the PCB and carry out the commissioning procedure again. |

| The ventilation unit is leaking water | |
|---|---|
| Cause | Solution |
| a) The condensate drain is not connected. | • Connect one of the two condensate drains. |
| b) The condensate drain is blocked. | • Unblock the condensate drain and try to identify the cause of the problem. |
| c) The second condensate drain is open and not connected (hissing sound). | • Close the second condensate drain by folding back the tab with the plug and clicking it into the condensate drain. |

| The ducts leading outside are wet (on the outside) and/or are leaking water | |
|---|---|
| Cause | Solution |
| a) The ducts leading outside are not thermally insulated or vapour-tight. | • Ensure that the ducts that lead outside are thermally insulated and vapour-tight over their entire length. |
| b) The roof feedthrough is not rainproof or vapour-tight. | • Replace the existing roof feedthrough(s) with rainproof and vapour-tight roof feedthrough(s). |

| The valves are noisy | |
|---|---|
| Cause | Solution |
| a) No Heatrae Sadia noise dampening hose has been installed in the ducts leading into the dwelling. | • Install noise damping hoses on the ducts leading into the dwelling. |
| b) The air valves are not correctly adjusted. | • Put the ventilation unit in commissioning mode and readjust the system settings. |

| The air quality in the dwelling is not good / air supply and extraction in the dwelling are not working properly | |
|---|---|
| Cause | Solution |
| a) One or both filters are dirty or blocked. | • Clean or replace dirty/blocked filters. |
| b) The valves are dirty or blocked. | • Clean the valves. |
| c) The air valves are not correctly adjusted. | • Put the ventilation unit in commissioning mode and readjust the system settings. |
| d) The fan is not running. | • See "The ventilator is not running". |
| e) The ventilation unit is not responding to the RF sensors (PIR sensor, $CO_2$ sensor, RV sensor). | • See "The ventilation unit is not responding to the RF sensors". |

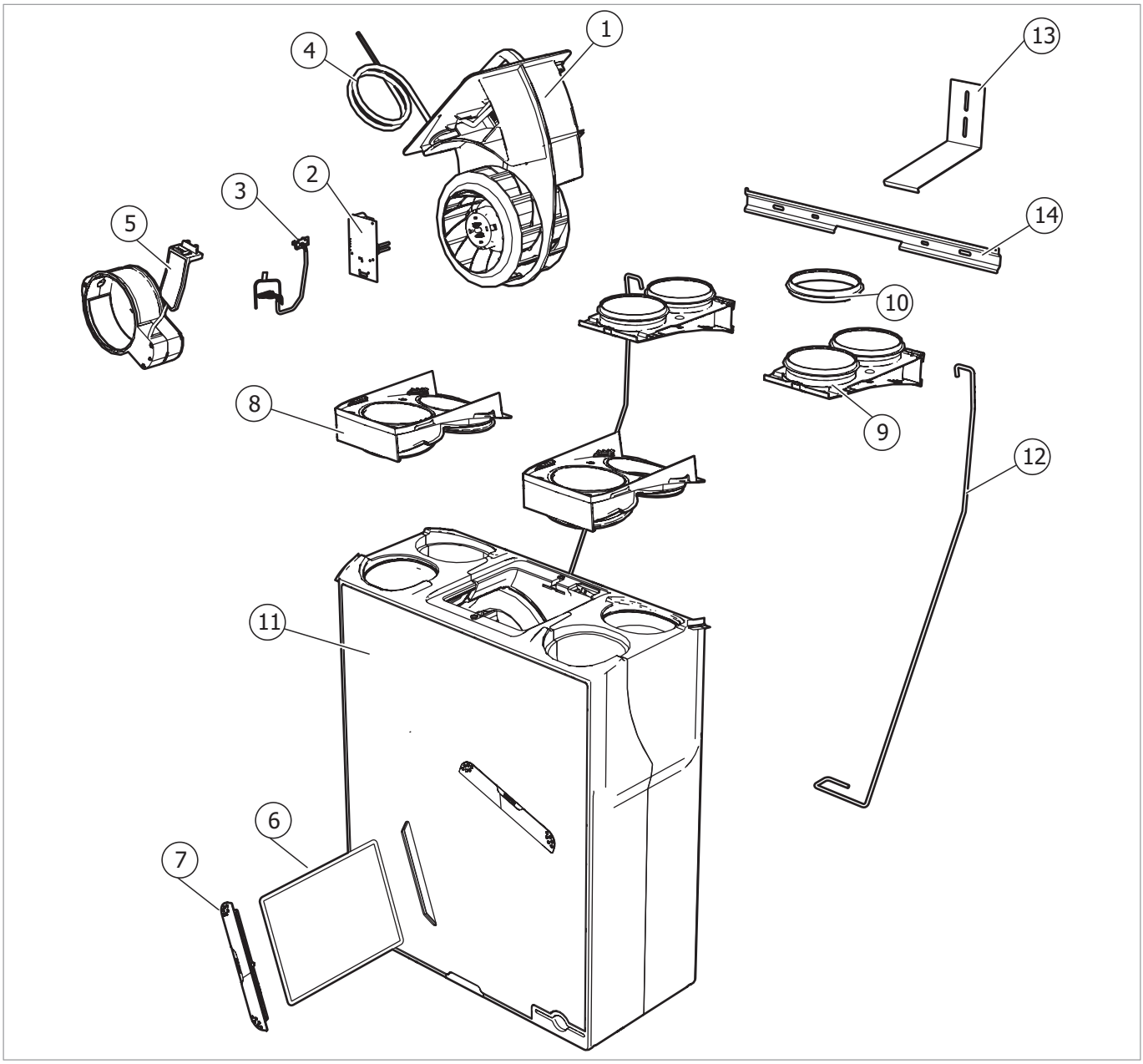
| Cold air is being supplied to the dwelling | |
|---|---|
| Cause | Solution |
| a) The filter in the extraction outlet is blocked. | • Clean or replace the filter in the air outlet. |
| b) The air valves are not correctly adjusted. | • Put the ventilation unit in commissioning mode and readjust the system settings. |
| c) The bypass valve is in bypass mode when it should not be. (*) | • Clean the bypass valve if it is dirty.<br>• Replace the entire bypass valve if it is defective. (*) |
| d) One of the temperature sensors is faulty. | • If the supply air temperature sensor is faulty, replace the wiring harness with the temperature sensor in the motor module.<br>• If the exhaust air temperature sensor is faulty, replace the entire bypass module. (*) |

* Only applies to Advance Plus

# 8. Service parts

| Service parts | | |
|---|---|---|
| No. | Item number | Description |
| 1 | 95607724 | Entire motor module |
| 2 | 95615089 | Motor module printed circuit board |
| 3 | 95607725 | Cable harness for motor module with (Advance Plus) outdoor temperature sensor |
| | 95970206 | Outdoor temperature sensor (Advance) |
| 4 | 95607827 | Power cable |
| 5 | 95970205 | Bypass valve assembly * |
| 6 | 95970009 | G4 filter set |
| | 95970010 | F7 filter set |
| 7 | 95607728 | Filter caps, set of 4 |
| 8 | 95607822 | Duct adapter EPP side with seals, set of 2 |
| 9 | 95607823 | Duct adapters duct side with seals, set of 2 |
| 10 | 95607824 | Seals for duct-side duct adapter, set of 4 |
| 11 | 95607825 | EPP housing with heat exchanger |
| 12 | 95607727 | Wire brackets, set of 2 |
| 13 | 95607726 | Ceiling mounting bracket |
| 14 | 95607826 | Mounting bracket |

* *Applies exclusively to Advance Plus*


1
2
3
4
5
6
7
8
9
10
11
12
13
14

# 9. Warranty

The warranty is valid for 2 years after the installation date.

## Disclaimer

This warranty does not apply to:

- Disassembly and assembly costs.
- Faults which are caused by incorrect treatment.
- Negligence or accident.
- Faults that have been caused by repairs by third parties without authorisation from Heatrae Sadia.

If the appliance does not function correctly or develops a fault please contact Heatrae Sadia immediately.

Ensure that only genuine spares are used for repairs.

# 10. Declarations

## Inbouwverklaring | Déclaration d'incorporation | Einbauerklärung | Declaration of incorporation

Heatrae Sadia
Hurricane Way
Norwich NR6 6EA
United Kingdom

Verklaart dat het product | Déclare que le produit | Erklärt dass das Produkt | Declares that the product:

- **Ventilation unit with heat recovery Advance – 95060001**
- **Ventilation unit with heat recovery Advance Plus – 95060007**

Must be considered as a partly completed machine and may not be put into service until the end machine into which it will be integrated has been declared as being in conformity with the provisions of the Machinery Directive **2006/42/EC** |
Doit être considéré comme une machine non terminée et ne peut pas être mise en service tant que la machine finale, installée à son emplacement définitif, n'est pas déclarée conforme aux dispositions des directives relatives aux machines **2006/42/CE** |

Voldoet aan de bepalingen gesteld in de richtlijnen | Répond aux exigences des directives | Entspricht den Anforderungen in den Richtlinien | Complies with the requirements stated in the directives:

- Low Voltage Directive **2006/95/EC**
- Electromagnetic Compatibility (EMC) Directive **2004/108/EG**
- Directive 2011/65/EU (RoHS)

Voldoet aan de geharmoniseerde Europese normen | Répond aux normes Européennes harmonisées | Entspricht den harmonisierten europäischen Normen | Complies with the harmonized European standard:

- EN 60335-1:2012 | EN 60335-2-80:2003/A1:2004
  EN 60335-2-80:2003/A2:2009
- EN 60730-1:2012
- EN 55014-1:2007 | EN 55014-1:2007/C1:2009
  EN 55014-1:2007/A1:2009 | EN 55014-1:2007/A2:2010
  EN 55014-2:1998 | EN 55014-2:1998/C1:1998
  EN 55014-2:1998/A1:2002 | EN 55014-2:1998/IS1:2007
  EN 55014-2:1998/A2:2008
- EN 61000-3-2:2006/A1:2009 | EN 61000-3-2:2006/A2:2009
  EN 61000-3-3:2013 | EN 61000-6-1:2007
  EN 61000-6-3:2007/A1:2011 | EN 61000-6-3:2007/AC:2012

Norwich, December 1, 2014.

HEATRAE SADIA

SMARTER | CLEANER | WARMER

HEATRAE SADIA HEATING
Hurricane Way, Norwich NR6 6EA
www.heatraesadia.com

SERVICE
01603 420100

EMAIL
itho@heatraesadia.com